MONTANA STATE LIBRARY
930 East Lyndale Avenue
Helena, Montana 59601
STATE DOCUMENTS ✓

NINETEENTH

BIENNIAL REPORT

of the

Montana State Board of Health

S
614
H2r
1937-
1938

[redacted]

For the Years

1937 - 1938

VITAL STATISTICS FOR THE YEARS

1936 - 1937

U196—6M—6-37 66

DEC - 4 2000

APR 2 0 2004

[redacted]

MONTANA STATE LIBRARY

3 0864 0014 6258 2

[redacted]

[redacted]

NINETEENTH

BIENNIAL REPORT

of the

104685

Montana

State Board of Health

For the Years

1937 - 1938

VITAL STATISTICS FOR THE YEARS

1936 - 1937

NAEGELE PRINTING CO., HELENA, MONT

DISCARDED
JUL 16 1969
LIBRARY
UNIVERSITY [illegible]

STATE OF MONTANA
State Board of Health

Helena, December 20, 1938.

Honorable Roy E. Ayers
Governor of Montana
State Capitol
Helena, Montana

Sir:

In compliance with Section 2447, Revised Codes of Montana, 1935, I herewith hand you the nineteenth biennial report of the State Board of Health. In doing so I wish to thank you most heartily for your support in all public health work.

Yours very truly,
W. F. Cogswell, M. D.
Secretary.

WFC/JB

NINETEENTH BIENNIAL REPORT OF THE MONTANA STATE BOARD OF HEALTH

Board Members:

E. M. Porter, M. D., President, Great Falls
G. F. Turman, M. D., Vice-President, Missoula
L. H. Fligman, M. D., Helena
R. V. Morledge, M. D., Billings
W. F. Cogswell, M. D., Secretary and Executive Officer, Helena

During the past biennium the Board has lost two of its valued members, Dr. E. G. Balsam of Billings and Dr. B. L. Pampel of Livingston.

Doctor Balsam died suddenly on May 13, 1937. He was appointed a member of the Board when it was reorganized in 1919 and held the position of President of the Board on several occasions. From 1914 to 1937 he was Secretary of the Montana Medical Association. He was very much interested in public health work and as Secretary of the Montana Medical Association he was able to bring about a close relationship between organized medicine and health work. Dr. R. V. Morledge of Billings was appointed to fill the vacancy on the Board.

Doctor Pampel was a member of the Board for nineteen years. He resigned to accept the position of Superintendent of the State Hospital for the Insane at Warm Springs in March, 1938. He will be greatly missed by the Board.

Changes in Personnel:

In April, 1936, Dr. Jessie M. Bierman was appointed Director of the Child Welfare Division. After two years' service she resigned to accept the position of Assistant Director of the Maternal and Child Health Division of the Children's Bureau in Washington, D. C. Doctor Bierman did an outstanding piece of work in Montana and we were sorry to lose her. She was succeeded by Dr. Edythe P. Hershey, who held the position of Maternal and Child Health Consultant in the Children's Bureau. Previous to going to the Children's Bureau, Doctor Hershey was Director of the Division of Maternal and Child Health for the Texas State Department of Health.

In August, 1936, Miss Anna H. McCarthy was appointed Supervisor of Public Health Nurses, which position she held until September, 1938. Miss McCarthy was thoroughly qualified for the work of this position and did much to organize the public health nursing service in the State.

The 1937 legislature repealed the Act creating the Orthopedic Commission and placed the crippled children's work under the newly created Public Welfare Department.

The same legislature created a Temperance Commission, designating the Secretary of the State Board of Health as a member of this Commission, the other members being the director of Child Welfare Services of the Department of Public Welfare, who is Chairman, and the State Superintendent of Public Instruction.

The 1937 legislature also created an Occupational Disease Commission consisting of two representatives of labor, two representatives of industry, and the Secretary of the State Board of Health as Chairman. The Commission has held six hearings in different parts of the State, when representatives of both labor and industry presented their problems to the Commission. The Commission has not yet made a report, but it is hoped that through the efforts of this Commission, labor and industry will be brought closer together and will in the future work in harmony.

The activities of the State Board of Health are carried on through eight divisions, namely, Administration, Communicable Disease and Rural Health Work, Vital Statistics, Child Welfare, Hygienic Laboratory, Water and Sewage, Food and Drugs, and Community Sanitation.

Reports on the work of the different divisions are herewith attached.

ADMINISTRATION

W. F. Cogswell, M. D., Secretary and Executive Officer.
Jessie Baxter, Chief Clerk.
Lewis Conrad, Bookkeeper.

The work of the Administration Division is to conduct the business of the organization, to formulate policies and rules and regulations to submit to the Board for action, and to coordinate and oversee the work of the other divisions. In addition to this, the Secretary is also Secretary of the State Board of Entomology, Chairman of the State Board of Eugenics, Secretary of the State Board of Embalmers, a member of the Temperance Commission, and Chairman of the Occupational Disease Commission.

SCHOOLS

The State Board of Health has for several years conducted a school for water works officials. This school has been operated under the direction of Dean W. M. Cobleigh of the School of Engineering, State College, Bozeman, and Mr. H. B. Foote, Director of the Division of Water and Sewage of the State Board of Health. The water works officials have received valuable information and through this school have been brought into close contact with the State Board of Health.

Another school has recently been organized for the laboratory technicians of the State for the purpose of giving them instructions in the method of typing pneumonia organisms. The first meeting was held at the State College in Bozeman, under the direction of Dr. D. B. Swingle, Dean of Science, State College; Dr. F. B. Cotner, Professor of Botany and Bacteriology, State College; Miss Edith Kuhns, Director of the Hygienic Laboratory of the State Board of Health, and Dr. E. D. Hitchcock, Great Falls, Consultant to the Hygienic Laboratory. Sixteen technicians from the eastern part of the State attended this school. In the near future another school will be held at the University of Montana in Missoula, under the direction of Dr. Donald Hetler of the Department of Bateriology at the University, and Miss Edith Kuhns.

RECOMMENDATIONS

It is recommended:

1. That an act be passed at the coming meeting of the legislature which will enable counties to organize full-time health departments, and where counties are unable to organize full-time health departments, to allow them to unite with other counties and form district full-time health departments.
2. That a food and drug act be passed to conform to the federal food and drug act recently passed by Congress.

3. That the title of the Child Welfare Division of the State Board of Health be changed to "Maternal and Child Health and Public Health Nursing Division." If this is done it will prevent confusion with the Child Welfare Services of the Department of Public Welfare.

4. That the legislature be asked to pass an act creating an Industrial Hygiene Division of the State Board of Health.

DIVISION OF COMMUNICABLE DISEASES

To: W. F. Cogswell, M. D., State Health Officer.

The following is a brief biennial report of activities of the Division of Communicable Diseases and the Division of Rural Health Work for the period from November 1, 1936, to October 31, 1938.

The personnel of the Department includes:

B. K. Kilbourne, M. D., Epidemiologist,
Theodora Tattan, Secretary.

The only change in the personnel in the Division of Epidemiology during the biennium was that of Secretary. Elizabeth Brady resigned June 10, 1937, and was succeeded by Theodora Tattan.

The work of the Department, as previously, has consisted of field work, investigating sources of epidemic diseases and keeping accurate records of the diseases as reported to the State Board of Health by the local health officers.

The accompanying tables show the number of cases of communicable diseases reported to the State Board of Health. Table I shows the cases reported for the years 1936, 1937, and the first ten months of 1938. Table II gives the record of the principal communicable diseases as reported in Montana for each year since 1920. This biennial period shows a marked decrease in most of the major communicable diseases over previous biennial periods, particularly the last ten months of this period. The smallpox epidemic which developed during the previous biennial period continued through the year 1937. During the summer and fall of 1938 an epidemic of encephalitis occurred following an epidemic of equine encephalomyelitis. These are the only diseases occurring in epidemic proportions during the biennial period.

Tuberculosis. There has been a slight but steady decline in the reported cases of tuberculosis during this biennial period. Reporting of cases before death has been much better during this period than during other biennial periods. The Department has assisted the State Tuberculosis Association in carrying out Mantoux testing programs in several of the high schools over the State.

Poliomyelitis. The incidence of poliomyelitis has remained low in Montana during this biennial period even though extensive epidemics occurred in the central and eastern states during the year 1937.

Meningococcic Meningitis. The number of cases of meningococcic meningitis reported is considerably below the five year average. There was also a greater incidence of this disease in many areas throughout the United States during the year 1937.

Diphtheria. Diphtheria has shown an all time low for this biennial period. Many of the communities throughout the State have carried on immunization programs which undoubtedly are directly responsible for the low incidence of the disease during this biennial period.

Typhoid Fever. Typhoid fever has also shown a new low for this biennial period. A total of 96 cases was reported to the State Board of Health during 1937 and 58 cases during the first 10 months of 1938. Most of these cases have been endemic rather than epidemic, although in the fall of 1938, 10 cases were reported which occurred in an extra gang that was working through North Dakota and Montana on the Northern Pacific Railway. These were undoubtedly caused by some carrier in the gang but we were unable to find the particular carrier.

Rocky Mountain Spotted Fever. The smallest number of cases of Rocky Mountain Spotted Fever was reported during this biennial period than any like period since records have been kept. The total number of cases reported during 1937 was 31, and 12 cases during the first 10 months of 1938. The marked increase in the number of vaccinations over the State undoubtedly is one of the factors in this marked decrease but it is questionable whether that alone is responsible for all the decrease. The disease did not appear in any new counties in the State that have not previously reported cases of spotted fever.

Scarlet Fever. The epidemic of scarlet fever that was present in the State during 1936 carried over into the early months of 1937; however, for the biennial period the total cases are less than one-half those of the preceding biennium.

Smallpox. The smallpox epidemic that had started before the close of the last biennial period carried over into the year 1937 in which year 898 cases were reported. This was the highest incidence of smallpox per 1,000 population of any state in the United States during 1937. During this epidemic practically all counties in the state were involved and the epidemic lasted until about May, 1938. The total number of cases reported for the first 10 months of 1938 was 284. The number of cases in the various counties was in direct proportion to the activities of the vaccination campaigns in the various counties.

Sylvatic Plague. During both years of the biennium the State Board of Health has operated the field laboratory truck for the investigation of Sylvatic Plague among rodents. During this period surveys have been made covering all of the territory in the southern half of the State west of Billings. During this period foci of infection have been found in rodents and fleas from rodents in three counties; two in Beaverhead County, two in Madison County, and two in Gallatin County. No human cases or suspected human cases were reported during this period.

Trichinosis. An outbreak of 36 cases of trichinosis occurred in Flathead County in December, 1937. Aside from two or three isolated cases of trichinosis this is the first outbreak that has occurred in the State of Montana. This was caused from eating smoked but uncooked sausage made from hogs that were being raised by a man living in the northern part of the county. Only one death occurred as the result of the infestation but 17 cases were hospitalized and all of the cases were incapacitated for a period varying from two to ten months.

Epidemic Encephalitis. An epidemic of encephalitis in human beings began the latter part of July and extended until October, 1938. A total of 67 cases was reported from 25 counties in the State. It seemed more prevalent in the central part of the State than in the western or eastern parts. It appeared first in human beings about two months following the beginning of the epidemic of equine encephalomyelitis. There were 24 deaths from the disease. No post material was obtainable and it was impossible to determine from examination of bloods and spinal fluids whether the human cases were due to the same strain of encephalitis as that which produced the equine epidemic. In Massachusetts four human cases were proven to be directly due to the same strain of virus that was responsible for the eastern epidemic among horses and in California one case was shown to be due to the western strain. The National Laboratory at Washington, D. C., did the laboratory work on bloods and spinal fluids furnished them but they have been unable to find any relationship to the equine strains.

Venereal Diseases. During this biennial period arsenicals and bismuth preparations have been furnished any physician requesting the same for the treatment of syphilis. Funds for these drugs have been made available through Social Security. The reporting of syphilis and gonorrhea by the medical men has been very lax, although better reporting has been had since the beginning of free distribution of the drugs. In spite of this, for the first 10 months of 1938, 87 doctors requested drugs for treatment and had reported no cases as compared to 92 reporting cases and also requesting drugs and 39 others reported cases but requested no drugs. The average number of cases reported by the physicians was 2.5 per each reporting physician. During the biennial period a total of $9,200.00 has been expended for arsenicals and bismuth preparations for distribution to the medical men.

BIOLOGICALS DISTRIBUTED

The State Board of Health has continued to supply at Board of Health prices, smallpox vaccine, typhoid vaccine, and diphtheria toxoid for immunization to physicians or health officers requesting the same. During this period a total of 4,844 cc of typhoid vaccine, 19,081 cc diphtheria toxoid, and 11,844 smallpox points have been distributed.

DIVISION OF RURAL HEALTH

The Division of Rural Health Administration has been combined with the Division of Epidemiology and is in charge of the Director of that Division. With the funds available from the Social Security Act, Title VI, additional aid has been given in Missoula, Cascade, and Gallatin Counties. In Missoula County the salary of three nurses, and part of the salary of the laboratory technician; in Gallatin County the Sanitary Inspector, two nurses, half the salary of one nurse, and part of the salary of the Health Officer; in Cascade County the salary of two nurses and a clerk, are supplied through Social Security funds. Lewis and Clark County, the only other county operating a full-time department, does not receive any aid through Social Security funds, although the Department was instrumental in having this county reorganized on a full-time basis. Eight counties, mostly in the drouth sections of eastern Montana, are supplied with public health nurses by aid from this Department through Social Security funds. One nurse is being supplied to the Fort Belknap Indian Agency to do field nursing on the reservation.

Trainees. During the biennial period funds have been available through Title VI of Social Security Funds, for training of personnel for various public health positions. During this period two M. D.'s have been in training in the Health Officers' Course, two Sanitary Inspectors in the Course for Sanitarians, and nineteen Public Health Nurses for a four months course in Public Health Nursing.

TABLE I.

Communicable Diseases Reported in Montana

Including Deaths from Communicable Diseases Not Previously Reported as Cases

	1936	1937	1938 (10 mo.)
Tuberculosis	497	486	408
Typhoid Fever	123	96	58
Dysentery	29	7	7
Smallpox	762	898	284
Diphtheria	85	62	38
Septic Sore Throat	108	131	55
Scarlet Fever	3,579	1,328	775
Measles	457	656	1,704
German Measles	56	69	42
Whooping Cough	653	1,010	1,708
Chickenpox	1,689	1,767	1,685
Mumps	4,179	2,654	630
Influenza	1,005	12,899	709
Pneumonia	841	737	405
Meningitis	48	23	15
Poliomyelitis	12	31	13
Rocky Mountain Spotted Fever	65	31	12
Erysipelas	56	61	50
Trachoma	60	313	237
Gonorrhea	621	486	276
Syphilis	471	659	508
Anthrax	....	1	....
Tularemia	1	11	5
Cancer	40	39	40
Undulant Fever	4	9	7
Encephalitis	17	13	70
Epidemic Jaundice	....	....	19
Actinomycosis	....	2	1
Tick Paralysis	....	2	....
Trichinosis	....	36	....
Amoemic Dysentery	1	5	——
Ophthalmia Neonatorum	....	2	....
Tetanus	1	....	2
Malaria	3	....	....
Enteritis	....	....	12
Puerperal Fever	1	....	....
Sore Throat	....	1	1
Other Diseases	201	188	120

TABLE II

Record of Certain Important Diseases from 1920

Number of Cases Reported Each Year

	Tuberculosis	Typhoid	Diphtheria	Smallpox	Scarlet Fever	Meningitis	Poliomyelitis	Spotted Fever	Measles
1920	863	241	269	1,066	891	19	25	26	4.491
1921	568	187	412	1,466	620	12	26	26	2,561
1922	368	144	426	636	676	23	47	58	67
1923	604	159	456	732	843	21	16	51	2,535
1924	648	130	548	950	1,040	16	182	47	6,049
1925	620	244	329	376	1,337	12	41	34	486
1926	528	117	208	395	2,065	42	12	37	2,596
1927	463	108	182	575	2,209	165	22	38	1,372
1928	448	133	231	853	846	188	65	32	840
1929	536	371	142	547	1,139	149	7	23	4,308
1930	534	120	77	379	1,355	62	20	22	664
1931	579	137	105	129	1,223	31	58	34	1,634
1932	568	142	32	142	868	18	9	100	5,476
1933	465	184	106	33	612	10	13	68	2,178
1934	638	136	178	19	628	22	321	74	2,105
1935	432	81	145	749	1,975	35	7	125	7,397
1936	497	123	85	762	3,579	48	12	65	457
1937	486	96	62	898	1,328	23	31	31	656
1938 (10 Mo.)	408	58	38	284	775	15	13	12	1,704

BUREAU OF VITAL STATISTICS

TO: W. F. Cogswell, M. D., State Health Officer and Registrar.

Sir:

It is my privilege and honor to submit the biennial report of the Bureau of Vital Statistics for your consideration. The report covers the calendar years 1936 and 1937.

The personnel of the Bureau includes:

Lucien L. Benepe, B. S., Deputy State Registrar
Helen B. Benson, Secretary
Lilly Mattson, Clerk

Do you know that, in Montana:—

A baby is born every 51 minutes or 7 every 6 hours or 28 every day.

A death occurs every 85 minutes or 5 every 7 hours or 17 every day.

The highest death rate in 17 years occurred in 1935-36 (11.5 per 1,000 of population).

The highest birth rate in 13 years occurred in 1936 (19.2 per 1,000 of population).

The 1937 infant mortality rate was the lowest in history (50.2 per 1,000 live births).

The 1937 maternal mortality rate was the lowest in history (3.4 per 1,000 live births).

The searching of the records increased 2,300 in 1937 over 1936.

The lowest tuberculosis death rate in history in 1936 (40.4 per 100,000 of population).

The lowest typhoid death rate in history in 1936 (1.8 per 100,000 of popualtion).

The only malaria death ever reported occurred in 1936.

There were two deaths from trichinosis in 1937.

One hundred twelve sets of twins were born in 1937 and 131 sets of twins and one set of triplets in 1936.

The mean age of mothers at childbirth was 26.8 years; while for the fathers it was 31.5 years in 1937.

The sex ration, in 1937, was 104 boys born to 100 girls.

The only pellegra death ever reported occurred in 1937.

Only four deaths from spotted fever were registered in 1937, an all-time low.

Disease of the heart caused every 5th death last year.

Vital statistics have, as their basic element, the registration of births and deaths and have to do with the tabulation and study of these two basic facts as they relate to the human inhabitants of specified areas for definite periods of time. Correlated with these and fundamental in their study are such factors of population as sex, color, marital conditions, ocupations, age grasping and the like.

Registration of births and deaths began in Montana June 1, 1907. Table No. I following shows the births and deaths with their rates per 1,000 of population and the infant deaths with the infant mortality rate (per 1,000 live births) and the birth-death ration since 1910.

TABLE I.

Year	BIRTHS Number	BIRTHS Rate	DEATHS Number	DEATHS Rate	INFANT DEATHS Number	INFANT DEATHS Rate	BIRTHS PER 100 DEATHS
1910	6,124	16.2	3,996	10.6	714	116.6	153
1911	7,542	19.0	4,006	10.1	717	95.1	188
1912	8,133	19.6	4,397	9.9	660	81.2	185
1913	8,682	20.1	5,098	11.6	812	93.5	170
1914	9,969	22.1	5,048	10.8	834	83.7	198
1915	11,132	23.8	5,242	10.8	816	73.3	212
1916	11,300*	23.2	5,483	11.9	970	85.8	206
1917	11,600*	23.0	6,421	13.1	1,090	94.0	181
1918	11,800*	22.6	8,985	17.2	1,027	87.0	131
1919	12,017	22.3	5,786	10.7	962	80.1	208
1920	11,862	21.6	5,289	9.6	862	72.7	224
1921	12,127	22.2	4,693	8.6	805	66.4	258
1922	11,060	20.3	5,106	9.3	763	69.0	217
1923	10,524	19.3	4,914	9.0	748	71.1	214
1924	10,283	18.9	4,991	9.1	683	66.4	206
1925	10,302	19.0	5,103	9.6	726	70.5	202
1926	10,008	18.5	5,375	10.0	757	75.6	186.
1927	9,875	18.3	5,185	9.9	651	65.9	190
1928	10,072	18.7	5,812	10.7	612	60.8	173
1929	10,080	18.7	5,748	10.7	640	63.5	175
1930	10,004	18.6	5,435	10.1	569	57.0	184
1931	9,642	17.9	5,278	9.8	578	59.9	183
1932	9,114	17.0	5,291	9.8	460	50.5	172
1933	8,950	16.6	5,217	9.7	451	50.4	172
1934	9,954	18.5	5,616	10.6	529	53.1	177
1935	10,050	18.4	6,281	11.5	594	59.2	160
1936	10,448	19.2	6,246	11.5	587	56.2	167
1937	10,230	18.7	6,123	11.2	513	50.2	167

* Estimated

POPULATION

There is no provision in Montana for a state census of population. We are dependent on the federal census which is taken every 10 years, and we have had no census since 1930. With the shifting of population of the past few years, of economic depression, we are unable to determine a satisfactory estimate of population for individual counties. An estimate has been made thru the utilization of the school census, but the results are unsatisfactory. The total state rates are based upon 545,000 estimated population.

RESEARCH

The research work, connected with certified copies of birth and death records, information and corrections, delayed record correspondence, disinterment permits, and special letters, amounted to a grand total of 6,101 in 1936, and this increased to 8,435 in 1937. The increase in most part is due to the activities created by the Social Security Legislation of recent years.

BIRTHS

The births for 1936 amounted to 10,448 with a birth rate of 19.2 per 1,000 population. This was an increase of 400 over 1935, and was the greatest number of births reported in any year since 1923.

In 1937 the total births reported were 10,230, a drop of 220 under 1936. The rate was 18.7. Montana's birth rate in both 1936 and 1937 was higher than the national average. The national birth rate for 1936 was 16.7 and 1937 was 17.0.

In Montana, last year, a baby was born every 51 minutes, which is 7 every 6 hours and 28 every 24 hours.

MONTANA BIRTH RATES COMPARED TO UNITED STATES AVERAGE FOR THE PAST FIVE YEARS.

YEAR	MONTANA	UNITED STATES
1937	18.7	17.2
1936	19.2	16.7
1935	18.4	16.9
1934	18.5	17.1
1933	16.6	16.5

DEATHS

There were 6,246 deaths reported in 1936, with a death rate of 11.5; this compared to 6,282 in 1935 with the same death rate. These two years showed the highest death rates since 1918. In 1937 there was a decrease in deaths under 1936 of 159 or a total of 6,123. The death rate dropped to 11.2 per 1,000 population. There is a death every 85 minutes or 5 every 7 hours or 17 every 24 hours.

MONTANA DEATH RATE COMPARED TO UNITED STATES FOR THE PAST FIVE YEARS.

YEAR	MONTANA	UNITED STATES
1937	11.2	11.2
1936	11.5	11.5
1935	11.5	10.9
1934	10.6	11.0
1933	9.7	10.7

INFANT MORTALITY

There were 587 deaths of infants under 1 year of age reported in 1936. The infant mortality rate was 56.2 per 1,000 live births; this was a slight reduction under 1935. In 1937 there was a satisfying drop in infant deaths to 513 and the death rate showed to be 50.2; which, incidentally, is the lowest infant mortality rate in history.

MONTANA AND UNITED STATES INFANT MORTALITY RATES FOR PAST FIVE YEARS.

YEAR	MONTANA	UNITED STATES
1937	50.2	54.4
1936	56.2	57.1
1935	59.2	55.7
1934	53.1	60.1
1933	50.4	58.1

MATERNAL MORTALITY

Mothers who died in child birth in 1936 were 60; the maternal mortality rate was 5.7 per 1,000 live births; this was an increase over 1935. In 1937, however, there was a most gratifying decrease in maternal deaths; only 35 mothers died in child birth, and the rate dropped to 3.4, which is the lowest rate for this cause in history. Only two other states in the United States show a lower maternal mortality rate than Montana for 1937.

A COMPARISON OF MONTANA AND THE UNITED STATES MATERNAL MORTALITY RATES FOR PAST FIVE YEARS.

YEAR	MONTANA	UNITED STATES
1937	3.4	4.9
1936	5.7	5.7
1935	5.2	5.8
1934	5.8	5.9
1933	6.0	6.2

COMMUNICABLE DISEASES

Typhoid Fever. We can show the fewest deaths for typhoid ever in our history for 1936. Ten deaths occurred from this disease with a death rate of 1.8 per 100,000 population. In 1937 there were 11 deaths with a rate of 2.0.

Smallpox caused three deaths in 1936 and two deaths in 1937.

Measles continued an extreme low for both years; two deaths in 1936 with a rate of 0.4 and four deaths in 1937 with a rate of 0.8.

Scarlet Fever claimed 46 victims in 1936 with a rate of 8.4, while in 1937 it declined to 11 deaths with a rate of 2.0.

Whooping Cough caused the death of 16 in 1936 and 14 in 1937, with a rate of 2.9 and 2.6, respectively.

Diphtheria accounted for 11 deaths in 1936, the rate was 2.0, while in 1937 eight deaths were reported with a rate of 1.5.

Influenza deaths amounted to 130 in 1936 and increased to 298 in 1937. The rates were 23.9 and 54.7.

Dysentery caused seven deaths in 1936 and four in 1937.

Erysipelas showed 16 and 10 in the years 1936 and 1937.

Poliomyelitis three and seven in the years 1936 and 1937.

Lethargic Encephalitis two and five in the years 1936 and 1937.

Epidemic Meningitis 24 and seven in the years 1936 and 1937.

Tuberculosis killed less people in Montana in 1936 than during any other year. Two hundred twenty people died from some form of tuberculosis that year. There was an increase of 15 deaths in 1937, making a total of 235. The death rates for the two years were 40.4, an all-time low, and 43.1. It is interesting to note that the tuberculosis death rate has decreased by more than one-half since 1910.

104685

OTHER CAUSES

Cancer continues to increase slightly each year. There were 570 cancer deaths in 1936, with a rate of 104.0, and 583 deaths in 1937 with a rate of 107.0. It was second as a cause of death in Montana last year. This continued increase is possibly due to better diagnosis and to the fact that more people live to the older age groups than formerly.

Diabetes Mellitus has increased in number of deaths in recent years to the 10th leading cause of death in this state. In 1936 it caused 120 deaths and in 1937 it caused 109 deaths. The rates were 22.0 and 20.0 respectively.

Heart Disease caused every fifth death in Montana in 1937. It is by far the greatest cause of death and was more than twice its next greatest cause, namely, cancer. In 1936 it caused 973 deaths with a rate of 178.5 and in 1937 it caused 1,183 deaths with a rate of 217.1. The vast increase in heart disease deaths may be attributed in part to the extension of life into the old age groups by a saving of those under 40 years of age.

Pneumonia. Eighty fewer deaths occurred from pneumonia in 1937 than in 1936; 649 deaths and 569, respectively, were reported in those years. Over one-half of the excessive deaths for the past three years may be attributed to influenza and pneumonia.

Nephritis. There was a drop in the nephritis death rate from 69.4 to 57.6 in 1937. Total deaths from this cause for the two years were 387 and 314.

Suicides were practically identical for the two years; 103 in 1936 and 102 in 1937. Homicides, like suicides, were almost stationary; 22 occurred in 1936 and 24 in 1937.

Accidents were the third greatest cause of death in Montana in 1937, while they were second in 1936. There was a drop in the accident deaths from 681 to 578, or 103. **Motor Vehicles** were responsible for the greatest number of accidental deaths in both years; 169 in 1936 and 178 in 1937. **Falls** held second place both years. **Drowning** was third in 1936 and fourth in 1937. Exchanging places with mine accidents in those two years, **burns** were fifth and **firearms** sixth for both years.

BIRTHS FOR 1936 AND 1937 BY SEX, COLOR AND MONTHS.

	1936	1937
BIRTHS	10,448	10,220
Male	5,292	5,242
Female	5,154	4,978
White	9,698	9,539
Indian	672	616
Mexican	60	54
Yellow	10	7
Black	5	9
Brown	3	5
Illegitimate	178	192
Twins	131	112
Triplets	1	0
Stillbirths	220	236
Jan.	826	848
Feb.	857	776
Mar.	917	852
Apr.	854	838
May	921	945
June	905	923
July	892	934
Aug.	869	892
Sept.	904	831
Oct.	830	782
Nov.	838	797
Dec.	835	802

DEATHS OF 1936 AND 1937 BY SEX, COLOR, MARITAL CONDITION AND MONTHS.

	1936	1937
DEATHS	6,246	6,123
Males	3,974	3,953
Females	2,272	2,170
Single	2,157	1,969
Married	2,531	2,541
Widowed	1,213	1,300
Divorced	219	205
Unknown	100	108
Jan.	579	808
Feb.	595	578
Mar.	556	500
Apr.	537	502
May	514	539
June	470	452
July	510	459
Aug.	479	433
Sept.	425	441
Oct.	514	457
Nov.	518	427
Dec.	549	527
White	5,830	5,739
Indian	339	317
Mexican	31	27
Black	38	29
Yellow	7	9
Brown	1	2

The money received for certified copies and searching the records for the two years was $955.46 for 1936 and $1,445.95 for 1937.

Respectfully submitted,

L. L. BENEPE.

DIVISION OF CHILD WELFARE

(For the promotion of maternal and child health)

Edythe P. Hershey, B. S., M. D., Director, Child Welfare Division
Maud A. Brown, M. A., Director of Health Education Services
Anna H. McCarthy, R. N., Supervisor of Public Health Nursing
(Resigned September, 1938)
Alice M. West, B. S., R. N., Field Advisory Nurse
Luella M. Stickney, R. N., Field Advisory Nurse
Betty Foot, A. B., Stenographer
Jean Husband, B. S., Stenographer
Lewis Conrad, B. S., Fiscal Agent

The program of the Division of Child Welfare for the promotion of maternal and child health of the Montana State Board of Health, which was initiated in 1917, has been greatly extended in cooperation with the Children's Bureau, United States Department of Labor, through the provisions of the Social Security Act, under Title V, Part I, since April, 1936.

The biennial report for the period January, 1937, to December, 1938, is herewith submitted.

Scope of Program:

(1) Extension of statewide facilities for continuous health supervision throughout pregnancy, infancy and childhood in cooperation with local physicians and county health officers.

(2) Education through professional and lay groups regarding maternal, infant and child care thereby establishing highest possible standards of services.

(3) Study of facilities for maternal and child care and cooperation with physicians and public health agencies and lay groups for extension of such facilities.

(4) Cooperation with all state and local agencies dealing with health and welfare problems of mothers and children.

(5) Promotion of health education through the schools and general public.

(6) Integration of maternal and child health services with all other aspects of public health services in the state.

State Advisory Committee. The State Advisory Committee is composed of 23 members representing the various state agencies participating in maternal and child health and welfare activities. This committee met in March, 1937, and in March, 1938, to discuss the program as carried out by the Division and to formulate future plans and policies in cooperation with agencies represented.

Maternal and Child Welfare Committee of Montana State Medical Association. This committee serves as a technical advisory committee to the Division, reviewing material prepared for distribution and advising regarding policies and programs as they relate to the medical profession of the State. Through this committee, a study of maternal deaths has been made during 1937-1938. Plans are under way in cooperation with the county medical societies for further promotion of maternal and child health programs through sub-committees of county medical societies to work with the state committee and arrange for obstetric and pediatric programs. Plans are also under way for cooperation with the Division in a state-wide maternal care study.

Education:

Through Magazines and Newspapers. The Director of the Division edits a column each month in the Montana Education Association Journal, and in the monthly journal of the Montana Parent-Teachers Association, and prepares newspaper releases from time to time.

Distribution of Literature:

Prenatal Letters. Monthly letters to expectant mothers are sent on request of physicians, nurses, dentists and mothers themselves. Seventy five physicians in the state request these letters for their patients. Included with these are pertinent letters prepared by the Montana Dental Association regarding dental health.

2,038 women received prenatal letters in 1937.
2,337 women received prenatal letters in 1938.

Considering that relatively few Indian mothers receive these letters, this 4,375 represented over twenty-five per cent of all births in Montana exclusive of Indians.

Health Literature. This includes pamphlets on infant and child care, dental health, nutrition, social hygiene, communicable disease, etc.
76,423 pamphlets distributed in 1937 and 1938.

Health Films. A number of educational films have been loaned to schools, medical associations and other groups.

Group Education. Members of the staff have met with groups throughout the State to present the State program or to give talks on various aspects of maternal and child health. These groups included Women's Clubs, Parent-Teachers Associations, County Children's Councils, Medical Societies and Montana Conference of Social Work. Since a number of these groups represented State and District meetings as well as local groups, opportunity has been given to reach the State as a whole.

Post-graduate Education. In cooperation with the Division of Epidemiology, a two-day series of post-graduate meetings on obstetrics, pediatrics and venereal diseases were conducted in Billings, Havre, Anaconda, Miles City, Livingston and Missoula, through the Montana State Medical Association. In the first three cities, public meetings were held with attendance of about 650. One hundred and seventy-five physicians registered for these lectures. The Montana Medical Association voted to discontinue participation in the post-graduate medical education program.

Well-Child Conferences. These conferences for infants and preschool children were held in 11 counties in the following centers:

Flathead County—Whitefish.
Chouteau County—Big Sandy, Geraldine, Fort Benton.
Judith Basin County—Stanford, Hobson, Geyser.
Toole County—Shelby, Sunburst.
Ravalli County—Hamilton, Corvallis, Darby, Stevensville.
Teton County—Choteau, Dutton, Power, Fairfield.
Madison County—Harrison, Virginia City, Twin Bridges.
Jefferson County—Boulder, Clancy, Whitehall.
Lewis and Clark County—Augusta.
Valley County—Fort Peck, New Deal, Wheeler, McCone City, Park Grove.
Sweetgrass County—Big Timber.

With the exception of conferences in Valley and Sweetgrass Counties, the Director of the Division assisted local physicians in examinations as a demonstration of method for conducting these conferences. The conferences also serve to awaken local communities as to needs for health supervision. Approximately 1,000 children were examined. Over one-third of these showed evidence of rickets, and 30% had other nutritional defects. Over one-third of the mothers had less than one month of prenatal care while approximately one-half had registered with their physicians before the fifth month of pregnancy. A large percentage of children examined were also immunized for diphtheria and vaccinated against smallpox.

Other conferences were held by local physicians at irregular intervals in Chouteau, Toole and Madison Counties.

Recently, cooperative plans have been developed for local physicians to conduct regular monthly conferences in Valley, Chouteau and Jefferson Counties. Similar plans are under way for Yellowstone, Phillips and Fallon Counties and Cascade County. Regular conferences are held in Silver Bow and Gallatin Counties.

Requests for assistance in conducting conferences were received from physicians in Big Horn, Fallon and Dawson Counties, but due to the resignation of the State Supervisor of Public Health Nursing, it has been impossible for the Director to give this service.

The conference in Sweetgrass was held under local auspices.

While conferences held once or twice a year have educational and demonstration value, it is felt that effort should be made to establish conferences for health supervision on a year-round basis.

Nursery Schools. The Division cooperated with the WPA Nursery Schools in providing the services of physicians for examination of children in 29 nursery schools, in 15 centers.

Prevention of Opthalmia Neonatorum. During 1937 and 1938, 11,506 ampules of silver nitrate were distributed free of charge to physicians, hospitals, osteopaths and midwives, for care of eyes of newborn.

Cooperation with Other Agencies.

Montana Tuberculosis Association. The tuberculosis control program is carried on in cooperation with the Montana Tuberculosis Association as a part of the generalized public health program of the county nurses.

Crippled Children's Service, Department of Public Welfare. The orthopedic field nurses serve as consultants for orthopedic cases carried by public health nurses who also assist in case finding and in clinics and follow-up cases under care.

Child Welfare Services, Department of Public Welfare. The social service case workers and the public health nurses frequently cooperate in their services for the greater effectiveness of both undertakings, and matters of policy involving both organizations are agreed upon by the two Directors. In counties where there is no public health nurse, the distribution of cod liver oil is handled by the social workers.

Montana Medical Association. Cooperation through the committees on maternal and child welfare has been referred to. Local medical groups serve in an advisory capacity to county nurses.

Montana Dental Association. Educational material has been prepared by this Association for distribution with prenatal letters and plans are under way for further study of dental health programs in schools.

Montana Parent-Teachers Association. The Director of the Division is now serving as chairman of Mental Hygiene for this Association, and prepares an article each month for the Journal.

State and Local Organizations. Every organization in the State, whether state-wide or local, which includes in its activities work on behalf of mothers and children, is given an opportunity to make its work more effective through the interest and cooperation of the State Board of Health and local public health nurses. These organizations are, in the 19 organized counties, represented in the

County Children's Councils. County Children's Councils are organized in 19 counties. These Councils are made up of representatives of various agencies concerned with maternal and child health. They serve as advisory councils for public health nursing service and carry on educational programs.

Study of Maternal Care Facilities. Inquiry was made into the existing facilities for maternal care among families in the lower income brackets in various parts of the State. Of 36 counties replying to questionnaires, only four reported provisions for adequate medical and hospital care for expectant mothers unable to pay for such service. In the large majority of counties, the county physician is expected to give maternity care as well as general medical care to all patients on relief for a miserable monthly salary. In many counties, there are no hospital facilities; in others, hospitalization is allowed only abnormal maternity cases. In only one county replying to the questionnaire is any provision made for giving service to families on work relief or farm security grants. These people are not considered county charges, but their small incomes barely supply food and clothing, with nothing left for medical care.

In a number of counties, the Board of County Commissioners has ruled that obstetric cases are not eligible for care in county hospitals. Since many homes are unfit for safe delivery in the home, and physicians do not feel they can assume responsibility for such cases, a serious problem in maternal care is presented in these counties.

May Day. Child Health Day was observed in 50 of the 56 counties. Chairmen were appointed in each of these counties and suggested programs and literature for use through schools, clubs, exhibits, newspapers, etc., were sent out by this Division to carry the slogan, "Speed Children on the Road to Health."

National Conference on Better Care for Mothers and Babies. This Conference, held in Washington, D. C., January, 1938, was attended by the Director of the Division and the Chairman of the Maternal and Child Welfare Committee of the Montana Medical Association. Reports of the Conference were distributed throughout the State.

Distribution of Cod Liver Oil. In view of nutritional deficiencies and evidence of widespread rickets among infants and preschool children, a carload of cod liver oil was purchased for free distribution among relief and borderline cases, for expectant mothers and infants, in cooperation with the Surplus Commodities Division of the Department of Public Welfare. This is distributed in counties under the direction of public health nurses and social workers in the counties not having nursing service.

Health Education. Health education courses were given by the Director of Health Education in the Eastern Montana Normal College, the State College at Bozeman and the Montana State University at Missoula. Through these courses, contact was made with many now serving as teachers in the State and an understanding gained of teacher training problems in the State.

The Director served in an advisory capacity to the Joint Committee on Health and Physical Education and prepared the Health Education Section for the use of teachers. This was issued in mimeographed form through the State Department of Public Instruction and distributed to all superintendents. The requests for this material have been so extensive that it is now planned to print the material for distribution to teachers.

Through field visits in the majority of the counties of the State, the Director of Health Education has visited county and city superintendents and teachers in their classrooms to consult with them regarding health education problems and study needs which can be met through the cooperative programs of the State Department of Public Instruction and the State Board of Health. An increasing number of requests are being received for consultation service of the Director of Health Education from city and county superintendents and individual teachers.

In the fall of 1938, the Director of Health Education was invited by the State Superintendent of Public Instruction, to participate in the State meeting of County Superintendents, and as a member of the staff for County Institutes. Such institutes have been held in five counties.

A series of health education leaflets, "Health in Education," for superintendents has been prepared by the Director, and loan package pamphlet material assembled for their use.

Many new publications have been added to the loan library and these are being catalogued. Lists of available books will be circulated to increase the use of this library.

More intensive service has been given to Fergus and Yellowstone Counties in the development of their health education programs.

PUBLIC HEALTH NURSING

The public health nursing service is administered both through the Division of Child Welfare cooperating with the Children's Bureau, and the Division of Rural Health Work cooperating with the United States Public Health Service. The nursing service is under the direction of the Supervisor of Nursing* assisted by two advisory nurses, one of whom serves the western half of the State and the other the eastern half.

The public health nursing service in the counties is provided through participation with the State Board of Health. The usual plan of cooperation is for the county to pay half of the nurse's salary and the expenses and the State Board of Health pays the remaining half of the nurse's salary. Greater participation by the State has been granted in some counties which suffered economic distress as a result of drouth.

Every effort is made to establish this service on a year-round basis as it is impossible to develop an effective generalized nursing service on an itinerant basis. Since the State makes no appropriation for county nursing service, the funds available under the Social Security Act for such service are limited. It is not possible therefore to establish service in all counties and preference is given to those which participate on a yearly basis.

Public Health Nursing Education. The number of Montana nurses with training and experience in public health nursing has not been adequate to meet the needs of the State. Funds available through the Social Security Act have been used to give public health nursing training to 18 Montana nurses.

---

*Resigned September, 1938. Luella M. Stickney appointed Acting Supervisor January, 1939.

Staff education has been carried on through an institute for all public health nurses in June, 1937, held at Great Falls, and through the public health nurses' section of the State Nurses' Association, in June, 1938. The supervisory staff also had a conference on maternal care nursing procedures at the Fort Peck Demonstration.

Supervision. All county nurses are under the direct supervision of the advisory nurses who visit them in the field assisting them in planning of program and in nursing procedures and techniques. All public health nurses in Montana report to the State Supervisor of Public Health Nursing. Report forms and record forms have been prepared to make for uniformity of service.

PUBLIC HEALTH NURSING SERVICE

County	1937	1938	Nursing Service—December, 1938
Beaverhead	12 mos.	12 mos.	One county nurse paid in full by county. One school nurse.
Big Horn	12 mos.	12 mos.	One county nurse; one school nurse.
Blaine	——	2 mos.	One nurse, special assignment Ft. Belknap Agency.
Carbon	9 mos.	9 mos.	One school nurse.
Carter	——	11 mos.	One county nurse.
Cascade	12 mos.	12 mos.	Seven county nurses associated with County Unit, including 3 school and 1 tuberculosis nurses. (One industrial; one Metropolitan.)
Chouteau	12 mos.	12 mos.	One county nurse.
Custer	12 mos.	12 mos.	One county nurse.
Daniels	——	8 mos.	One county nurse.
Dawson	12 mos.	12 mos.	One county nurse.
Deer Lodge	8 mos.	8 mos.	One school nurse. (One industrial.)
Fallon	4 mos.	12 mos.	One county nurse.
Fergus	5 mos.	12 mos.	Two county nurses.
Flathead	——	——	No service.
Gallatin	12 mos.	12 mos.	Four county nurses associated with County Unit. One college nurse.
Garfield	4 mos.	1 mo.	One county nurse.
Glacier	——	——	(Two Indian Service nurses.)
Golden Valley	——	——	No service
Granite	——	——	No service
Hill	8 mos.	8 mos.	One school nurse.
Jefferson	8 mos.	12 mos.	One county nurse.
Judith Basin	6 mos	1 mo.	One county nurse.
Lake	——	——	(One Indian Service nurse.)

County	1937	1938	Nursing Service—December, 1938
Lewis & Clark	12 mos.	12 mos.	One county nurse associated with County Unit. One school nurse. (One Metropolitan.)
Liberty	——	——	No service.
Lincoln	9 mos.	8 mos.	(One part-time school nurse.)
McCone	12 mos.	12 mos.	One county nurse.
Madison	12 mos.	——	One county nurse.
Meagher	——	——	No service.
Mineral	——	——	No service.
Missoula	12 mos.	12 mos.	Four county nurses associated with County Unit. (One Metropolitan.)
Musselshell	6 mos.	——	One county nurse.
Park	8 mos.	——	One county nurse.
Petroleum	——	——	No service.
Phillips	——	12 mos.	One county nurse.
Pondera	——	——	No service.
Powder River	5 mos.	1 mo.	One county nurse.
Powell	12 mos.	12 mos.	One school nurse doing general service during summer.
Prairie	2½ mos.	——	One county nurse.
Ravalli	11 mos.	12 mos.	One county nurse.
Richland	12 mos.	12 mos.	One county nurse.
Roosevelt	9 mos.	6½ mos.	One county nurse. (One Indian Service nurse.)
Rosebud	7 mos.	3 mos.	One county nurse. (One Indian Service nurse.)
Sanders	——	7 mos.	One county nurse.
Sheridan	3 mos.	3 mos.	One county nurse.
Silver Bow	12 mos.	12 mos.	One county nurse, two school nurses, one tuberculosis nurse. (Two Metropolitan nurses.)
Stillwater	——	——	No service.
Sweet Grass	——	——	No service.
Teton	9 mos.	12 mos.	One county nurse.
Toole	12 mos.	8 mos.	One county nurse (appointment pending 4 mos.)
Valley	12 mos.	12 mos.	Three nurses. Demonstration Fort Peck Area.
Wheatland	5 mos.	6 mos.	One county nurse.
Wibaux	——	——	No service.
Yellowstone	12 mos.	12 mos.	Three county nurses, two school nurses. (One Metropolitan nurse.)

In 1938, county public health nursing service (exclusive of Indian service) was carried on in 23 counties. It will be well to note that three counties had only one month of service during 1938 (Garfield, Judith Basin and Powder River); and two counties had less than six months' service in 1938 (Rosebud and Sheridan).

Requests from counties for public health nursing service at the present time far exceed funds available to fill these requests, and a large area of the State, although representing the less densely populated areas, remains in need of service.

In addition to the nursing service as tabulated, there are three public health nurses on the State staff, and two orthopedic field nurses associated with the Director of the Crippled Children's Division of the Department of Public Welfare. There are at the present time, 67 public health nurses serving a population of over five hundred thousand people for the State of Montana.

Maternity Demonstration Unit at Fort Peck. In April, 1937, the home delivery service was inaugurated in the Fort Peck project towns with three public health nurses serving the area. Antepartum, delivery and postpartum nursing care are given in addition to the infant, preschool and school health supervision. All of the physicians serving the area are using the nursing service. The following figures are taken from the statistical reports of the Maternity Demonstration for the years 1937 and 1938. (Statistical reports for fourth quarter 1938 are not available for this report.)

Home nursing visits to antepartum cases	931
Cases attended by nurses for delivery service	189
Nursing visits to postpartum cases	1,330
Home nursing visits to infants 1 month to 1 year	1,231
Home nursing visits to infants under one month	956
Inspections of school children for presence of communicable disease	2,358
Home and office nursing visits to school children	760
Complete nurse's inspections	776
Referred to physicians	257
Referred to dentists	394
Home nursing visits for bedside care	131
Nursing visits to crippled children	92

Report of Services. The following statistical report (not including the fourth quarter of 1938) indicates the general type of program as carried on by public health nurses and the services rendered. The program is adapted to meet the needs of the county as each county differs in typography, population, social and economic conditions and public health and medical facilities.

In **Communicable Disease Control**, the nurse works closely with the health officer and other local physicians, reporting all suspicious conditions, doing such follow-up as is advised by them, and also giving parents, teachers and students instruction in the care and control of communicable disease. Immunization, particularly against smallpox and diphtheria, is stressed by the nurse and every county having service has had a definite immunization program.

Home visits to patients with communicable disease	17,390
Smallpox vaccinations arranged through nursing service	33,576
Diphtheria immunizations arranged through nursing service	15,000
(Of these, 28% were under five years of age)	4,244

Slowly, Montana communities are accepting immunization for the infant and preschool child.

In **Venereal Disease Control,** the nurse assists the health officer and does such follow-up as is requested by him or by other physicians.

Home visits by nurses to venereal disease patients........................ 190

Public health nurses use every opportunity to present to interested persons information on the care and control of communicable disease, including the venereal diseases. Forty-four talks were given to an attendance of 667 individuals.

In the **Tuberculosis Program,** the nurse cooperates with the local physicians and the Montana Tuberculosis Association in case finding, follow-up on cases and contacts, and assists in the Mantoux testing program. Practically every community in this State needs more intensive work in tuberculosis, and the nurse in a generalized program gives this type of service all through the year.

Field nursing visits	11,900
Office nursing visits	2.902
Number of Mantoux tests	20,939
Number of X-rays taken	4,872
Admissions to sanatoria	254
Public lectures and talks	292
Attendance	18,309

In the **Materinty Service,** the nurse tries to secure early and continued medical supervision for every expectant mother; she assists the mother to carry out the physician's instructions, to prepare for confinement and the care of the baby. Frequently, she assists in securing aid for indigent mothers. Classes may be held, talks and demonstrations given and every effort made to promote adequate community resources for maternal care. While no organized program of home delivery service exists outside the Demonstration Area, all other nurses have offered this service to the physicians.

Home and office visits to antepartum cases	5,567
Cases given delivery service	228
Home visits to postpartum cases	4.367
Public lectures and talks	15
Attendance	530

In **Infant and Preschool Health Supervision,** the aim is for nurses to secure continued health supervision for all babies. To that end, home visiting is emphasized. Particularly with the first baby there are so many details of care with which the nurse can assist that it is recommended that the nurse routinely make a home visit, soon after birth, or soon after the mother returns from the hospital. More and more, physicians are advising mothers to bring babies back for regular medical supervision and health conferences and nursing home visits stimulate the demand for such services.

Once a community knows a nurse is interested in mothers and babies, there is increased demand for home visiting. The home visit offers the most valuable opportunity for combining teaching with service. The nurses all have cooperated in the distribution of cod liver oil and protective foods to families on the basis of nutritional need.

Infant home and office visits	13,764
Infant visits to medical conferences	700
Preschool home and office visits	17,727
Preschool visits to medical conferences	2,537
Public lectures and talks	115
Attendance	1,918

School Nursing Services. The popular conception of a public health nurse is a nurse who works in the schools. The nurses working under the State Board of Health carry on a generalized nursing program including the health problems of school age children. Health education is but one phase of the whole educational program and must include health supervision, health teaching and healthful school environment. Nursing service is an adjunct to the health education program, but the function of a school nurse is primarily that of health supervision. Too often the school nurse serves as a truancy officer or for first aid care of minor injuries. The State Board of Health promotes in every way possible medical examinations of school children, and it is the function of the nurse to educate parents regarding necessary medical care and guide parents to proper facilities for obtaining this care. Nurses' inspections of school children do not take the place of medical examinations and too often school authorities and parents look to the nurse for services which are beyond her scope of service. The health of the school age child cannot be considered apart from his home environment and the social and economic conditions in the home must be considered. Nurses are, therefore, urged to spend the greater part of the time in home visits. Continued inspections for finding of defects without opportunity to follow up these cases for corrective care is not a fruitful activity. The nurse serves as a link between the home and the school in the health supervision and health teachings given in the school and serves to aid in the control of communicable disease in the schools and community.

Inspections by physicians or nurses for detection of communicable disease	179,366
Examinations by physicians	16,520
Examinations by physicians with parents present	1,128
Field nursing visits	40,161
Office nursing visits	40,991
Inspections and prophylaxis by dentists or dental hygienists	12,438
Complete nurses' inspections of school children	62,540

Adult Hygiene. As the nurse makes her calls, many adults consult her regarding personal problems, so this section is included to give room for such reporting.

Office visits	8,124
Home visits	2,758

Morbidity Service. While there is constant need for health supervision of all groups, there is also an urgent need for nursing care of the sick. Many more nurses are needed to meet the demand, but as far as is possible the nurses give nursing care, with a view to teaching someone in the family to continue this care.

Home visits for bedside care	15,353

Crippled Children's Services. Public health nurses cooperate with the Division of Crippled Children of the Department of Public Welfare by reporting to it all cases of crippled children. The nurse also assists in arrangements for diagnostic clinics, assists at the clinics, makes investigations and does follow-up through home visits under the supervision of the orthopedic field nurses.

Home visits to crippled children	1,753
Public lectures and talks	64
Attendance	1,945

Hearing Survey. Through the use of group audiometer a hearing survey was carried on in 17 communities. The limitations of this program are recognized in that this method of testing cannot be used below the 3rd or 4th grades and this test without careful examination of nose and throat conditions by competent physicians will not serve to indicate the true condition or extent of hearing loss. The hard of hearing problem is two-fold, involving the medical care and treatment as well as the problems of education and vocational guidance. A general survey has educational value in that it creates an awareness in the community, but is of limited value unless followed through for competent diagnosis, care and education of those found to be handicapped.

28,558 audiometer tests were given;
1,115 (3.9%) indicated loss of hearing.

The 3.9% found with indications of loss of hearing were those who had a loss of nine units or more. Studies have indicated that a loss of less than 12-15 units should not be considered significant so that the percentage of those examined having a significant loss of hearing would be lower than the figure reported.

To further the development of this program and that of eyesight conservation, it is the plan to seek the cooperation and guidance of Montana ophthalmologists and otolaryngologists.

UNMET NEEDS AND RECOMMENDATIONS

During the past two years covered by this report, the Child Welfare Division has made extensive progress in the development of an organized maternal and child health service extended into local areas. Due to change in administration with appointment of a new Director in April, 1938, and the resignation of the State Supervisor of Nursing, September, 1938, leaving this service to be carried by the Director pending an appointment, the program of the Division has been largely carried on in status quo during the past eight months.

The experience of these two years has revealed conditions and needs in the State so that objectives may be more clearly defined. It has been necessary to develop services gradually and train personnel during this time. Recommendations regarding needs for further development of the program are as follows:

(1) Pending the organization of full time county health units or district units, state funds should be made available to further extend public

health nursing services to all counties in the state as only 22 of the 56 counties now have full time nursing service and 8 additional counties have less than twelve months' service, leaving 26 counties without any such service.

(2) Plans should be made for regional conferences of field nurses to be conducted under direction of state supervisor and advisory nurses. Continuous staff education is necessary for improvement of services and standardization of methods.

(3) The plan for staff education through granting of stipends should be continued so that Montana graduate nurses may be qualified to meet the need for trained public health nurses.

(4) Further extension of County Children's Councils with development of suggested material for educational programs to be used in these lay groups, as these Councils form the nucleus for understanding and participation of communities in the public health program is recommended.

(5) Development of a program for further reducing infant mortality rate through education and facilities for care of premature babies, with more intensive work in one or more hospital centers in cooperation with local obstetricians and pediatricians is recommended.

(6) Provisions should be made for carrying on maternal care study as recommended by the Maternal and Child Welfare Committee of the Montana Medical Association.

(7) Plan should be extended for organization of well child conferences in local communities, these conferences to be conducted by local physicians at regular intervals throughout the year in cooperation with the State Board of Health. Since the number of pediatricians in the state is very limited, requests of local physicians for consultation and advisory service through the State Board of Health should be met by provision for a pediatrician on the staff of the Division for field services.

(8) It is recommended that a study should be made of maternity homes and hospitals receiving maternity patients with provisions made for licensing these institutions and thereby maintaining higher standards. The Child Welfare Services of the Department of Public Welfare is now designated by law to inspect and license maternity homes. Since this primarily is a medical and public health problem, legislation should be considered to relieve the Department of Public Welfare of this duty, assigning it to the State Board of Health giving authority for adequate regulation of maternity homes and opportunity to assist hospitals receiving maternity cases in maintaining highest possible standards of service.

(9) Success of the maternal and child health program depends ultimately on the understanding of, and participation in, the local programs by local physicians. The medical director of the Division should therefore through the Maternal and Child Welfare Committee of the Montana State

Medical Association and through personal contacts with physicians in the State, use every opportunity to interpret the program to physicians in the State. Because of limited medical personnel, the medical director should serve in consulting and advisory capacity to local physicians in the State in their public health activities in maternal and child health, but it is recommended that direct services of the Director be limited to occasional demonstration activities.

(10) The name, Child Welfare Division of the State Board of Health, is confusing in that there is a Child Welfare Division in the State Department of Public Welfare. It is recommended that the legislature be requested to change the name of this division to the Division of Maternal and Child Health.

REPORT OF THE HYGIENIC LABORATORY

Edith Kuhns, B. S., Director
Harry Gelsing, B. S., Chief Bacteriologist
Arthur O'Donnell, B. S., Serologist
A. L. Vadheim, Jr., B. A., Laboratory Technician
J. E. Haffey, Laboratory Helper
Dorothy Donaldson, Clerk
E. D. Hitchcock, M. D., Consultant

To: W. F. Cogswell, M. D., State Health Officer.

Sir:

It is my privilege and honor to submit this report of the activities of the Hygienic Laboratory from November 1, 1936, to November 1, 1938, for your consideration.

Functions of the Division

1. To aid in the diagnosis, investigation and control of communicable diseases. Its activities are, therefore, limited as far as diagnosis is concerned, to those procedures having to do with the identification of specific infections and do not include clinical pathological examinations.

2. To cooperate with the other departments, copies of all positive communicable diseases are sent to the epidemiologist and the health officers in order to facilitate their knowledge and control of these communicable diseases.

3. To distribute containers of various types to physicians, hospitals and institutions for the collection and shipment of specimens for examination by the laboratory.

4. Supervision of registered and approved laboratories. Reg. XV, b, of the Rules and Regulations of the State Board of Health requires that all laboratories, private or institutional, in which specimens are examined for evidence of communicable diseases, shall register annually with the State Department of Health. The regulations also provide for the approval of laboratories which conform to the required standards. This approval is offered on a voluntary basis. It is the duty of an authorized representative of the Hygienic Laboratory to make at least one annual visit of inspection to all registered laboratories and those desiring approval are granted Certificates of Approval, if found to meet the desired requirements.

5. To carry on investigations and research in connection with outbreaks of disease and to constantly strive to improve methods for laboratory diagnosis.

Laboratory Methods and Procedures

The policy of adhering to recognized official methods, modified in a few instances to meet Montana needs, is followed in all procedures. These methods are those recommended by the American Public Health Association, the Association of Agricultural Chemists and the United States Public Health Service.

Personnel

There have been several changes in the personnel within the past two years. One full time technician has been added to the staff with funds allotted to the State Board of Health under Title VI of the Social Security Act. This has somewhat relieved the other workers of the overload resulting from the continuous increase in the volume of work performed by the laboratory.

Changes in Physical Equipment

With aid received from funds allotted to the State Board of Health under Title VI of the Social Security Act, the following new equipment was purchased and added to the laboratory. A 37° water bath to care for the increased serological tests, a smaller 56° water bath to care for the agglutination tests for typhoid to detect "O" agglutinins, a new centrifuge which replaces an old machine, a new binocular microscope, a gas heated hot-air oven to care for the drying and sterilization of the larger amount of glassware being used for serological tests, and twelve new animal cages which have been added to the animal quarters to care for the increased inoculations.

Volume and Scope of Work

The tabulated report that follows gives in detail the number and types of examinations performed and the diagnostic outfits, containers and supplies distributed during this period.

This service was given through the active cooperation of 466 physicians, 22 hospitals and 12 institutions. A recent survey shows that of the 56 counties composing the state, only two, Golden Valley and Petroleum, have not had specimens submitted from physicians within their boundaries.

The laboratory made a grand total of 111,449 examinations for this biennium, a yearly average of 55,724 and a monthy average for the two years of 4,643. This is an increase of 36,048 (32.3%) over the biennium of 1934-36. Increased serological tests for syphilis account for 33,328 of these examinations. The balance is due mainly to an increased demand for complement fixation tests and smears for gonorrhea, together with slight increases in the number of examinations for agglutinations and some of the miscellaneous procedures.

The increase in the number of examinations for syphilis is an anticipated result of the present publicity given to venereal diseases by the U. S. Public Health Service and many other agencies throughout the United States. A comparison shows that the increase amounted to 37.8% for the last biennium over that of the previous period. 6.7% of the specimens gave positive results. Examinations for gonorrhea totaled 6,201, an increase of 1,701 over those of 1934-36.

The number of containers distributed numbered 77,393, compared with 58,707 for the previous biennium. Of these 58,250 were Wassermann containers and 9,646 for gonorrhea specimens. A check is being made at the present time as rapidly as the limited clerical help will permit, to determine if any are being retained in offices throughout the state instead of remaining in circulation.

EXAMINATIONS, HYGIENIC LABORATORY

November 1, 1936—November 1, 1938

TYPE OF EXAMINATION	Positive	Doubtful	Negative	Unsatisfactory	Total Exams.	Total Specimens
BLOOD						
Syphilis—						
Complement Fixation Reaction	3,077	340	41,389	1,040	45,846	45,846
Precipitation Reaction	2,291	787	38,686	508	42,272	......
Gonorrhea—						
Complement Fixation Reaction	261	145	1,631	44	2,081	......
Tuberculosis—						
Complement Fixation Reaction	848	219	541	212	1,820	......
Typhoid—						
Agglutination Reaction	140	77	1,311	16	1,544	1,544
B. Paratyphosus "A"—						
Agglutination Reaction	1	4	1,513	26	1,544	......
B. Paratyphosus "B"—						
Agglutination Reaction	13	8	1,498	25	1,544	......
Undulant Fever—						
Agglutination Reaction	16	4	1,476	34	1,530	......
Tularemia—						
Agglutination Reaction	14	11	559	5	589	......
Blood Cultures—						
Typhoid Group	51	......	1,003	19	1,073	1
Other Organisms	......	......	......	......	29	22
Cell Count	......	......	......	......	29	29
Differential Count	......	......	......	1	35	36
Hemoglobin	......	......	......	1	1	1
Blood Grouping	......	......	......	......	4	4
Smears for Malaria	......	......	8	1	9	9
Blood for Agglutination for Dysentery	5	7	27	......	39	39
SPINAL FLUID						
Syphilis—						
Complement Fixation Reaction	73	6	651	67	827	827
Complement Fixation Reaction for T. B.	2	1	3	2	8	3
Colloidal Gold Reaction	......	......	......	9	858	......
Globulin Reaction	......	......	......	9	608	......
Sugar	......	......	......	......	25	......
Cell Count	......	......	......	......	39	......
Meningitis—						
Meningococci	1	......	5	......	6	6
Other Organisms	......	......	......	......	80	60
Guinea Pig Inoculations	......	......	......	......	9	7
SMEARS						
Slide Preparations—						
Gonorrhea	945	255	2,892	28	4,120	4,120
Vincent's Angina	99	......	36	......	135	135
Miscellaneous	45	3	103	3	154	154
Eosinophiles	22	......	23	2	47	47
SPUTUM						
Tuberculosis	146	4	2,022	36	2,208	2,208
Other Organisms	2	7	......	1	13	13
Guinea Pig Inoculation	......	......	......	......	29	29
THROAT CULTURES						
Diphtheria	102	60	724	19	905	905
Virulence Test	1	......	2	......	3	3
Other Organisms	41	......	42	3	86	86
Hemo-Streptococci	9	1	43	1	54	54

TYPE OF EXAMINATION	Positive	Doubtful	Negative	Unsatis-factory	Total Exams.	Total Specimens
TRANSUDATES AND EXUDATES						
Bacteriological	....	....	....	....	69	69
Chemical	....	....	....	....	8	8
Guinea Pig Inoculation	....	....	....	....	66	66
FECES						
Typhoid Group	22	2	306	2	332	332
Other Organisms	....	....	....	....	25	25
Ova and Parasites	5	1	80	....	87	87
Physical and Chemical	....	....	....	....	15	15
URINE						
Typhoid Group	....	....	25	1	26	26
Gonococci	1	1	3	....	5	5
Other Organisms	....	....	....	....	38	38
Guinea Pig Inoculation	....	....	....	....	290	290
Chemical	....	....	....	....	23	23
Microscopic	....	....	....	....	32	32
FOOD POISONING						
Bacteriological	....	....	....	....	11	11
Toxin	....	....	....	....	8	8
Autogenous Vaccine	....	....	....	....	6	6
Breast Milk	....	....	....	....	19	19
Miscellaneous	....	....	....	....	20	20
Fungi Scrapings	2	1	13	....	16	16
Fungi Cultures	2	3	5	....	10	10
Miscellaneous Cultures	....	....	....	....	100	100
Darkfield for Treponema	4	....	14	1	19	19
Smears for Treponema	4	....	11	....	15	15
No Specimen	....	....	....	....	1	1
Specimen for Identification	....	....	....	....	5	5
TOTAL					111,449	57,434

CONTAINERS DISTRIBUTED—Nov. 1, 1936, to Nov. 1, 1938

WASSERMANN			
Containers	18,324		
Bottles	39,026	58,350	
DIPHTHERIA			
Containers	759		
Tubes	1,953		
Swabs	1,882	4,594	
TUBERCULOSIS			
Containers	2,314		
Bottles	2,446	4,760	
GONORRHEA			
Containers	3,214		
Slides	6,432	9,646	
FECES			
Containers	353		
Bottles	355	708	
Widal Outfits	186	186	
Darkfield Outfits	75	75	
Urine Containers	6	6	
Cough Plates	27	27	
Miscellaneous Cultures	79	79	
TOTAL			77,431

Examination Cost Data

The total expenditures for the fiscal years 1936-38 were $24,114.50, exclusive of aid derived from Title VI, Social Security Act, an increase of only 5.7% over those of 1934-36. A total of 105,880 examinations was made during this corresponding period, so that the total cost per examination may be placed at 22 cents, the lowest cost average per examination of any previous two-year period so far.

Educational

Slides for microscopic examination of various bacterial forms, molds, blood cells and other subjects of interest are prepared and distributed to High School Science departments upon request. Health literature is also available.

Papers are prepared for talks and publications, when requested, for various individuals or organizations.

New Work and Procedures

An important change has been made in the routine procedure of examination of specimens for syphilis. The use of Dr. John A. Kolmer's modified technique for the Kolmer-Wassermann has been adopted. He and others have found that his modified technique in which he uses larger quantities of serum, a modified antigen, and a slightly larger quantity of complement, increased the sensitivity of his test about 4% without appreciably increasing the anticomplementary or non-specific reactions. The Kahn diagnostic test will continue to be run as an accompanying precipitation test.

Arrangements have been made with the U. S. Public Health Service for participation in the third series of the survey being conducted by the Division of Venereal Diseases, for the evaluation of sero-diagnostic tests for syphilis in use in state laboratories. The series, the third in which we have taken part, is to begin in January of 1939. The results of this study will be made known later.

Following recommendations of the Laboratory Conference on Serodiagnosis of Syphilis, League of Nations Health Organization, and many others, the practice of reporting the exact results of serological reactions in pluses is to be discontinued and all reactions will be reported as simply positive, doubtful, or negative serological reactions for syphilis.

Blood cultures have been run on clots of all blood specimens submitted for Widals since August, 1937. Results obtained show such a procedure to be warranted since positive findings serve as valuable diagnostic aids in the absence of positive Widal reactions and as confirmatory evidence in cases giving positive reactions.

Containers for the collection of specimens for delayed darkfield examinations for Treponema pallida, the spirochaete of syphilis, have been distributed to interested physicians. Returns indicate that such a method, whereby serum is collected from suspicious lesions in small capillary tubes, which are sealed and mailed to the laboratory for examination by the darkfield method, is practicable since it has been found that the spirochates, if present, remain viable over surprisingly long periods of time.

In recognition of the fact that adequate bacteriological service is the foundation of a pneumonia control program, plans were completed to hold a training school for laboratory technicians from hospitals and clinics where recent methods in the diagnosis of pneumonia would be taught. This school to be held in two sections, for the convenience of those attending, at Montana State College and Montana State University under the sponsorship of the State Board of Health and these respective institutions. The section at the State College met for a three days' session December 1st, 2nd, and 3rd. Instruction was given in Neufeld typing and accessory diagnostic methods for pneumonia to the sixteen attending. Brief lectures were given on the incidence and occurrence of types, value of serum treatment and related topics. The session at the State University will take place the early part of January, 1939. An attendance of about twenty is anticipated there.

It is to be hoped that further stimulus to the laboratory pneumonia program may be given by distribution free of charge by the Hygienic Laboratory to the various approved laboratories, of a special rapid growth culture media to be used in blood culturing in pneumonia cases. The detection of a bacteremia in pneumonia as an indication of the prognosis and treatment is recognized as a most important service to the patient.

Future Proposed Lines of Work

Since comparative studies from other laboratories seem to indicate the proceeding to be of value, beginning December 1, 1938, all specimens of body fluids submitted for guinea pig inoculations are to be cultured also on Petragnani's media. A comparison of the results obtained by the two methods will be made known later.

A study has been made to determine what combination of selective media for the routine isolation of typhoid bacilli from stool specimens would be most practical and efficient. As a result the present preservative media used for shipping purposes is to be changed, an enrichment media, selenite broth, will be employed preliminary to streaking, and bismuth sulphite and desoxycholate citrate agars adopted as plating media.

Special Investigation

An outbreak of trichinosis involving 37 persons, chiefly the members of one family, occurred in December, 1937, at Columbia Falls. Dr. Kilbourne, the epidemiologist, has prepared a detailed report of this outbreak. The laboratory participated in cooperation with the local health authorities in making differential blood counts and in skin testing as many of the patients and suspects as could be contacted, thirty in all. At the request of the National Institute of Health, who kindly furnished us antigen for the skin tests and who are making a special study of means of perfecting the methods of diagnosis in trichinosis, blood specimens were secured from seven of the hospitalized cases and forwarded to Washington, D. C., for precipitin tests. These were reported later by them as positive in a high dilution in every case.

During the months of July, August and September of 1938, a number of spinal fluid specimens were examined from actual and suspected cases of encephalitis. These examinations revealed findings comparable with those of other laboratory workers in the examination of similar specimens during the St. Louis outbreak. These were, a clear fluid having a slight increase in cells, a normal or slightly elevated sugar level, a moderately increased globulin and an occasional tabetic curve obtained with Colloidal Gold solution.

A human case of malignant edema was discovered in September, 1938, by the laboratory, the first that we have had referred to us. The patient, a farm worker, had received the infection from a splinter which he had run into his hand. Specimens of pus from the lesion were submitted to the laboratory. Culture and animal inoculation from saline washings of the swab yielded the organism, Clostridium oedematis maligni. Death occurred within a week after receiving the initial wound.

Two strains of actinomyces were isolated in 1938 from human infections, one from a lesion of the arm of a stockman and the other from a pleural effusion of a man, occupation unknown.

Recommendations for Future Consideration

The volume of work undertaken by the laboratory at the present time is such that considering the number of persons employed, each person may be credited with a yearly average of 15,921 examinations or a monthly average of 1,325. This number is outside the limit of the number that may be undertaken if efficient operation is to be expected, for correct scientific work of this nature can not be done under too long or continuous pressure. Vacation periods bring an added load, so that some provision should be made, if funds are available, to employ help during these emergency periods.

The need of larger quarters is making itself felt to a marked degree, each year bringing a constantly increasing volume of work. It is to be hoped that some time within the near future extra space may be made available for the use of the laboratory, to comply with these needs.

The office work has been simplified in every respect that is consistent with reliable work, but the help of a part time clerk is needed during the months of the greatest activity to help with the records and filing of reports to facilitate rapid reporting of examinations.

The Advisory Council of Laboratories met twice during the year 1938 to discuss matters of interest to those in the laboratory field. It is to be hoped that these meetings may continue to take place at least once a year to assist in maintaining a close cooperation between the clinical laboratories and the hygienic laboratory.

Acknowledgments

The interest that you have continued to take in the work of this Division is highly appreciated and your helpful advice on the problems presented to you is gratefully acknowledged.

The cooperation from the directors of the other divisions and members of their staffs is appreciated. It is a pleasure to mention that there has been the best of cordial relations with other departments, institutions and laboratories of the State.

Respectfully submitted,
EDITH KUHNS,
Director Hygienic Laboratory.

REPORT OF THE DIVISION OF WATER AND SEWAGE

Biennial Period Ending November 30, 1938.
H. B. Foote, B. S., A. M., Director
W. M. Cobleigh, Dean of Engineering, State
College, Bozeman, Consultant
Ludwig S. Champa, B. S., Laboratory Assistant
C. W. Brinck, B. S., Chemical Engineer
(to August 15, 1938)
L. E. Corkill, B. S., Chemical Engineer
(from August 1, 1938)
Frances Kranick, Clerk (to July 15, 1938)
Altha Schaefer, Clerk (from July 15, 1938)

To W. F. Cogswell, M. D.,
State Health Officer:

The principal work of the Division of Water and Sewage is comprised of the following activities:

1. Bacteriological and chemical examination of water samples of both public and private supplies.
2. Field inspection of public and private water supplies.
3. Field inspection of sewage disposal systems.
4. Field inspection of public swimming pools.
5. Inspection of plans for public water supplies.
6. Inspection of plans for public sewage disposal systems.
7. Inspection of plans for public swimming pools.

Laboratory Testing of Water

The testing of samples of water makes up the bulk of the laboratory work. A check upon the condition and operation of public water supplies is obtained by frequent routine bacteriological tests. In order that each supply will receive proper attention at regular intervals, a calendar has been prepared which lists for each week the cities to which sampling equipment is to be sent.

The State Board of Health owns a considerable number of insulated shipping cases and bottles which are used for the collection and shipment of samples. These are sent by express, properly sealed, to the collector who, after the collection of samples, packs them with ice, seals and returns them to the laboratory by express, charges collect. The collector is usually the local water superintendent or the health officer, who is carefully instructed in the matter. For the sealing, a self-locking tin seal is used on which is stamped the name of the State Board of Health, and a number for identification.

This system fits very satisfactorily into our extensive territory where the visiting of supplies is attended by considerable expense. The local collectors cooperate excellently so that little delay due to their failure to collect is experienced.

In the testing of water from a great many private supplies, samples are transmitted by mail in mailing cases, a stock of which is kept on hand.

There are now in Montana 119 public water supplies. Of these, 111 serve the public in cities and 8 are at State Institutions. The sources of these supplies are 57 creeks or other streams and 115 springs or wells, 172 in all.

Since April, 1935, the testing of water samples for the Federal Government from such CCC camps as are located in Montana has been a regular part of the laboratory activity. Containers for these samples have been provided by the Government and transportation charges have been paid by the Government. In the case of the Indian and National Park Service work, the samples have been sent to the laboratory under Government frank or bill of lading.

Through an arrangement with Professor Edmund Burke, Chemist at the State College, Bozeman, the data obtained from chemical analyses of water samples have been sent to him for interpretation from the standpoint of the suitability of such waters for irrigation, in cases where such information is requested. Inasmuch as the same analytical data can be used for interpretation from the standpoint of domestic use and irrigation use, this arrangement eliminates much duplication of analyses. The same may be said of arrangements with Dr. Butler of the Livestock Sanitary Board relative to the suitability of waters for stock watering purposes.

In any testing of water, the laboratory follows very closely the standard methods either of the U. S. Public Health Service or of the Association of Official Agricultural Chemists. Our laboratories are well provided with both equipment and supplies. Since the first of April, 1938, we have been using the Brilliant Green Bile confirmatory media in place of Endo's.

The following tabulation shows the amount of laboratory work done during the past twenty-five months:

SOURCE—	Bacteriological	Chemical	Percent of Total
Samples from Public Water Supplies	8,168	60	71.9
Samples from Private Water Supplies	1,274	255	13.4
Samples from Tourist Camp Water Supplies	176	1	1.6
Samples from School Water Supplies	133	20	1.3
Samples for U. S. Government	786	78	7.5
Samples from Miscellaneous Sources	363	132	4.3
Total	10,900	548	100.0
GRAND TOTAL			11,448

Plans examined during the past twenty-three months were of the following:

New City Water Systems	9
Extensions to Existing City Water Systems	26
New City Sewer Systems	3
Extensions to Existing City Sewer Systems	24
Sewage Disposal Systems for Schools	10
Other Public Sewage Disposal Systems	6
Swimming Pools	13
Public School Buildings	109
Grease Trap	1
TOTAL	201

Most of the plans were submitted in connection with W. P. A. projects. Of the total P. W. A. projects at least forty-eight were for school buildings.

Field Activities

The field work is done by railway and automobile travel. It is the intention and endeavor of this Division to see each public water supply once a year and the larger ones—especially the purification plants—oftener. Frequently it is necessary to return to a given city to make follow-up investigations or to investigate special conditions where they may arise. When investigating these public water supplies, the city or water company officials are interviewed and the trips and inspections are made in their company. The owners and operators of public water supplies in Montana are aware of the necessity of maintaining proper sanitary conditions and excellent cooperation is usually found. In this way the maximum benefits to be derived from inspections are obtained. For the most part, too, the men in charge of the public water supplies in this State are awake to the modern trends in water treatment and water quality. When in a given city, private water supplies, swimming pools and ice fields are visited and inspected in addition to other public structures, including the municipal sewer systems.

There are in this state 71 public sewer systems. Two new systems are under construction. Very little treatment of sewage is given here and such as is effected is through sedimentation basins, septic and Imhoff tanks.

The City of Lewistown has voted bonds with which to finance the building of a modern sewage treatment plant. Some assistance will be secured from the Public Works Administration. The interesting feature lies in the type of plant to be built. It is planned that the treatment will be afforded the sewage through a so-called mechanical plant which provides sedimentation under controlled conditions, possibly chemical precipitation and the digestion of the sewage solids or sludge in separate digestion tanks. This, it is anticipated, will remove to ninety per cent of the settleable solids of the sewage and will prevent the gross pollution of Spring Creek, a condition that has existed for many years.

The State Board of Health views this as a progressive step and hopes that other cities will follow the example of Lewistown in constructing plants which are of this modern type. The State of Montana contributes some pollution to streams in cases where the untreated wastes are discharged from state institutions. This is notably true of Twin Bridges where the wastes from the State Orphans' Home are discharged without treatment to the Beaverhead River, and at Warm Springs where wastes from the State Hospital for the Insane are discharged without treatment to Warm Springs Creek.

Two years ago we recommended to the Superintendent at Twin Bridges that he include in his budget sufficient funds to build a simple treating plant which would eliminate the discharge of any waste to the river. We are informed that his requests were refused. On November 1, 1938, because of a complaint of a rancher, a survey of the situation was made at Warm Springs. The approximately three thousand people at that hospital contribute a large amount of sewage to Warm Springs Creek which, in the summer time, has a very low flow. Estimates have been received covering the installation of a modern plant which indicate the cost for satisfactory treatment should not exceed possibly $20,000.

It is our opinion that the State of Montana should take an active interest in this program and should be the first to lead the way toward preservation of our streams. There are many situations which have received our attention and which need correction, but it seems doubtful that much progress can be made in this phase of municipal sanitation if the State itself violates the rules of good practice

Because of the extreme pollution of the Milk River by beet sugar factory wastes produced at Chinook, citizens of Harlem lodged a complaint with the State Board of Health and in consequence a hearing was held in Helena on March 2, 1938. At the conclusion of the hearing, Mr. Cannon, General Superintendent of the Utah-Idaho Sugar Company, offered to finance an intensive investigation during the next run of the factory.

The State Board of Health accepted this offer and at a conference held in Chinook with the officials of the sugar company on July 25th Mr. H. B. Hommon, Sanitary Engineer for the U. S. Public Health Service, recommended Mr. C. W. Brinck, then on the staff of the State Board of Health. The sugar company officials accepted the recommendation and Mr. Brinck was employed, starting his work in Chinook on August 15th. Since that time he has been diligently at work making laboratory and field investigations, having in view the control of the factory wastes to the extent of saving the quality of the Milk River water for the people of Harlem. The sugar factory officials have made many improvements based upon recommendations growing out of the public hearing of March 2nd. These improvements have included strengthening and heightening the embankments about the waste impounding basins, the installing of additional power for the mechanical screen, the closing of possible avenues of escape of seepage from the various basins to West Fork and provisions for frequent patrolling of all embankments to prevent breaks.

As this is written, no effects of the factory wastes have been observed at Harlem. The factory will run approximately one hundred and twenty days and perhaps longer. The Milk River is still open but is subject to decreased flow upon the stopping of diversion from the St. Mary's system.

Mr. Johnson, of the U. S. Reclamation Service, who has charge of this matter, has assured the State Board of Health that he will continue to divert the St. Mary's water just as long as possible.

There has been considerable activity in the improvement in various ways of public water supply systems under the Public Works and the Works Progress Administrations. Under the latter, especially, has much improvement been made in the sanitary conditions at schools and in the extending of the sanitary facilities to otherwise unsewered areas in villages and cities.

Since the inauguration of the registering of drillers of water wells (Law passed in March, 1931) and up to November 1, 1936, there had been submitted to the State Board of Health approximately 500 logs or drillers' reports. Since that time 277 reports have been received. At the present time there are registered in Montana, under the law, 137 well drillers.

Since our last biennial report was written, the State Board of Health has inaugurated a more intensive program of public swimming pool control. A bulletin has been published which includes the regulations and much useful information which has heretofore been unavailable. We believe that because of our activity the quality of water provided for bathing is improved. Operators for the most part are anxious to cooperate with authorities to the end that our swimming pools will not only be satisfactory but will be attractive to the largest number of prospective attendants.

From the data obtained through the medium of the monthly reports, we are able to assist architects and designing engineers as to optimum sizes and best facilities to provide in any new pools which are to be constructed. We wish that our local health officers would take a more active interest in this work.

Our data now shows that the attendance at any open or outdoor swimming pool for the average month closely approximates the total population of the community in which it is located.

The State Board of Health has available for emergency purposes a portable liquid chlorine control apparatus. During the past two years this was installed on one water supply to care for emergency conditions. This was at Bozeman.

We now have available also two control machines designed to feed hypochlorites to water. These were installed at one time or another at six different stations caring for emergency conditions.

Through arrangements with companies making and distributing liquid chlorine, there is kept on hand in our office, cylinders of liquid chlorine for immediate shipment to places where needed. Twice during the past two years was chlorine sent out on short notice to Bozeman.

Our ability to assist in this very practical way during emergencies is very gratifying since we feel that quick action has in most cases probably averted much illness. It is difficult to evaluate the benefits of preventive measures because one does not know with any certainty what has been prevented. Cases of illness which may have been water-borne are quite low and this is one measure of the effectiveness of our methods of control. We plan to continue this feature of our work.

While records are not complete for the calendar year 1938, it appears that our typhoid death rate should be favorably low, at least in comparison with the immediately preceding years. A chart has been produced which shows an interesting relation between the typhoid death rate in Montana and the numbers of people furnished water of satisfactory sanitary quality. We see in this graph that the line representing the total population served with good water rose sharply between the years 1910-1920. It was during these same years that the typhoid rate made its greatest decline. Since 1920 there has not been a year but what an additional group or number of people obtained better drinking water so that the line rises although at a slow rate. The typhoid death rate has declined, but at a much slower rate than was true in the decade 1910-1920.

We interpret the divergence of these two lines as indicating not that the typhoid situation is solved but that it is at least partially under control. We see in the graph a possibility that, if the line representing population served with satisfactory water were to drop, the typhoid death rate would probably rise. This clearly indicates that the control measures exercised over public water supplies must be maintained without fail. There are relatively few people in urban communities who are drinking unsafe water. While we have no exact data, we believe that much of our rural population has satisfactory water, but there is much that can be done in this regard even yet. Whether our typhoid fever has reached an irreducible minimum perhaps remains to be seen. It is our purpose to continue efforts to eliminate the dangers so far as drinking water and waste disposal are concerned. While we do not mean to claim that the bettering of our drinking water situation is responsible for the total decline in typhoid, we are strongly of the opinion that it has been largely responsible. The finding of carriers, sanitation of milk and other food establishments and inoculations have played their important parts and credit, of course, is gladly given these activities for their share of the progress being made against our old enemy.

During the past summer, a full time employee was put into the field to inspect tourist camps and service stations. He was under the direct supervision of the Director of the Food and Drug Division, this Division cooperating by making laboratory tests of water.

In 1936 reports were made concerning 26 water supplies used in Montana to supply drinking water to trains in interstate commerce. During that year all were certified favorably with the exception of Miles City, Gardiner and Troy.

During the year 1937, 26 supplies were certified, with but three not meeting all of the requirements. This calendar year we have on our list 26 supplies. It is expected that all will be certified favorably with the exception of Miles City, for which a provisional certification will be recommended. The reason for this in Miles City is the presence of a number of cross connections which exist between the city water supply system and those in private homes.

This year the Public Health Service has requested us to make a careful checkup of methods used in watering trains. In most cases the water coolers are filled by means of a hose connection to the city water supply lines laid along the station platforms. In three or four cases where branch trains are watered, a container or bucket is used to transport the water to the cooler. The most obvious defect encountered in the methods of watering is the leaving of the hose lying along the platform all of the time, thus being exposed to contamination from various sources. This is being reported to the U. S. Public Health Service.

The following tabulation shows the amount of field work done during the past 25 months:

	No.	Percent of Total
Inspection of Public Water Supplies	275	45.5
Inspection of Private Water Supplies	57	9.4
Inspection of Sewage Disposal Systems	109	18.0
Inspection of Swimming Pools	42	6.9
Miscellaneous Inspections	122	20.2
TOTAL	605	100.0

OFFICE WORK

The office work consists in the writing of reports on all laboratory work done, of field investigations made, and in replying to letters of inquiry relative to matters which concern this Division. It also includes the inspection of plans which are submitted for various public water supply and sewage disposal systems, school buildings and swimming pools. The volume of correspondence is steadily increasing.

MISCELLANEOUS ACTIVITIES

The State Board of Health and the Engineering School at the State College in Bozeman have cooperated during the past eight years in conducting a two-day school for water works operators and superintendents. The attendance in these various schools has been most gratifying, although there are many operators from various cities who have not availed themselves of the opportunity afforded.

The programs for these schools have included discussions of problems with which the local water works operators deal. These problems have to do especially with sanitation, but also with such matters as pumping and power costs and methods, pipe line problems and problems dealing with the collection, purification and distribution of public drinking water supplies.

Dean Cobleigh, of the Engineering School, and Professor Therkelson, head of the Mechanical Department, have contributed to the programs and the Director of this Division has represented the State Board of Health.

It is our understanding that the coming legislature will be asked to consider a measure designed to fix the qualifications and to license men in these public positions. We feel the move is a good one and is to be encouraged. Most professional groups are subjected to some form of licensing and many tradesmen must conform to state law and regulation. It seems logical to require that a person, who is to conduct the very important functions of furnishing water to a community, should conform to certain requirements as to ability, reliability and efficiency.

The Montana Section of the American Water Works Association, which was established in Montana in 1923, continues to hold its annual meetings. The membership has slowly increased until at this time there are 38. The programs include technical papers, discussions of pertinent subjects and trips of inspection to public works of interest.

MONTANA STATE BOARD OF HEALTH
BIENNIAL REPORT OF THE FOOD AND DRUG DIVISION

October 1, 1936, to October 1, 1938.

J. W. Forbes, B. S., Director.

O. E. Sheppard, Ph. D., Professor of Chemistry, Montana State College, Consultant.

G. P. Raitt, Tourist Camp Inspector.

D. E. Warner, Field Inspector.

M. A. Murray, Clerk.

The Food and Drug Division of the State Board of Health functions to protect the health of the people by securing for them, as far as possible, foods and drugs that are not adulterated, not misbranded, nor handled nor served under insanitary conditions. Work is conducted under authority of the State Food and Drug Act of 1911 and consists of:

1. Cooperating with local, county and reservation health officers in making inspections.

2. Enforcing regulations adopted by the State Board of Health under authority granted the Board by law.

3. Licensing food-handling and food-manufacturing establishments as required by law.

4. Revoking licenses of insanitary establishments.

5. Collecting samples of food and drugs for laboratory analysis to determine whether or not they comply with the law.

6. Prosecuting those found selling illegal foods or drugs or otherwise failing to comply with the Food and Drug law.

7. Cooperating with Federal authorities in the control of interstate shipments of food and drugs.

INSPECTIONS

Because of lack of funds for employing a larger personnel the department has had to rely on local, county or reservation health officers or local or county sanitary inspectors for the majority of inspections made of the various establishments subject to license, regulation and supervision under the present laws. To facilitate the inspection work, blanks are furnished for noting sanitary conditions about the establishment and grading or scoring them according to the conditions noted. Upon receipt of the inspection report in this office, any insanitary conditions noted are taken up for correction with the operator of the establishment.

A summary of inspection in comparison with the preceding biennium follows:

Biennium	Inspections by Health Officers	Inspections by Department	Number of Licenses Issued
1935-1936	21,219	6,814	10,358
1937-1938	28,386	4,822	11,749

Probably numerous inspections are made by the health officers for which no inspection records are made out and submitted and for which we would have no record. Best cooperation is found with the full-time county health units. Part-time health officers, as a rule, make the inspections only where their inspection work does not interfere with their private practice.

With funds made available by the National Social Security Act we have been able to employ a tourist camp inspector for the past three summers. He was also instructed to check service stations and so-called "dude" ranches. Special attention was given to water supplies, sewage and garbage disposal. Service stations were also checked for common towels and common drinking cups. A summary of this inspection of tourist camps and "dude" ranches follows:

Year	Total Scored	A Score	B Score	C Score	D Score	Ordered Closed
1936 6 mos.	308	95 (31%)	82 (27%)	74 (24%)	52 (17%)	5 (1.5%)
1937 6 mos.	431	208 (48%)	108 (25%)	58 (13%)	35 (8%)	11 (2%)
1938 3 mos.	422	230 (55%)	110 (26%)	34 (8%)	17 (4%)	4 (1%)

SUMMARY OF SERVICE STATION INSPECTIONS

Year	Number Inspected	Satis-factory	Unsatis-factory	Common Cup, Towel or Both
1936 6 mos.	393	268 (68%)	125 (32%)	64 (16%)
1937 6 mos.	737	467 (64%)	270 (26%)	97 (13%)
1938 3 mos.	522	400 (77%)	122 (23%)	22 (5%)

There has been a decided improvement in camps and service stations as indicated by the number of A and B camps and satisfactory stations. Montanan's, Inc., are due their share of credit for this improvement as they have been writing low scoring camps urging them to build up their camps and improve tourist facilities.

The results obtained by this closer inspection and definite rating have all shown the advantage to be gained by a more rigid state inspection. If funds were avilable so that a sufficient field personnel could be employed to extend the inspections to food handling establishments, there would probably be as decided improvement noted in the food industries.

LICENSES

Separate licenses issued by the State Board of Health are required for each class of business listed below:

1. Public eating places
2. Meat markets.
3. Manufacturing bakeries and delicatessens.
4. Manufacturing confectioneries.
5. Soda fountains, ice cream parlors and soft drink establishments. This includes beer parlors.
6. Bottling works.
7. Canneries.
8. Tourist camps.

Licenses are issued upon receipt of application, accompanied by the fee of $2.00. Fees received for licenses are deposited with the State Treasurer to be placed in the General Fund. The following table shows the increase in licensed establishments since the enactment of the license provision for food establishments in 1921 and the tourist camp license in 1929:

Year	Food Licenses	Camp Licenses	Fees Collected
1922	2,974	......	$ 5,948
1929	4,268	117	8,770
1935	4,683	237	9,840
1936	5,116	322	10,876
1937	5,448	458	11,812
1938	5,364	479	11,686

This increase includes the return of the beer parlor in 1934, with a very decided increase in field work to see that proper facilities for washing glasses were installed in the various beverage bars. A large number of the bar operators are hold-overs from the bootleg days when they operated unregulated and with no regard for sanitation. It is difficult for them to understand why they should be called on to treat their glasses any different now than they did for years in the past.

A survey was made of a number of beverage establishments to determine the efficiency of their glass washing operations. Sterile swabs were prepared and held in a small amount of normal salt solution. A number of glasses from each establishment were swabbed out, the resulting bacterial accumulation plated and counted as the number of bacteria per glass. A tabulation of the findings is given below.

Establishment	Bacteria per Glass						Wash Solution			
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Hot Water	Cold Water	Chlorine Solution	Hot Water and Soap
Beer Parlor No. 1	195	275	750	250	1,200	750	x			
Beer Parlor No. 2	150	175	750	150	200	25*			x	
Soda Fountain No. 1	85	90	500	38	750	30				x
Beer Parlor No. 3	10,000	15*	110	36*	3*	1,600		5,000		
Beer Parlor No. 4	2,500	105	750	350	300	850			0	
Beer Parlor No. 5	400	450	350	1,000					0	
Beer Parlor No. 6	80*	14*	13*	43*	2,500			362		
Beer Parlor No. 7	150	57*	31*	115	1,200	200			x	
Beer Parlor No. 8	0*	250	300	11*	500	350			0	
Beer Parlor No. 9	125	200	500	225	52*				0	
Beer Parlor No. 10	4*	0*	1*	20*	1*	0*			x	
Beer Parlor No. 11	1,500	500	85	14	16	6	x			
Beer Parlor No. 12	300	1,200	250	1,500	500			2,500		
Beer Parlor No. 13	300	43*	100	46*	200				x	
Beer Parlor No. 14	500	700	1,000	1,200	1,500			1,200		

*Rinsed through chlorine solution and allowed to stand as recommended in washing instructions.

Glasses showing over 100 from the soda fountain were washed behind the counter by the girls during their rush work hour and had not been through the mechanical washer used on the other glasses. Of the two using hot water as the only wash, Beer Parlor No. 1 has a consistently high count while those glasses in Beer Parlor No. 11 below 100 had been wiped dry with a cloth and standing on the back bar for some time and the low count is probably due to the long standing period.

Knowing that glasses, knives and forks or other utensils with which the mouth comes in contact during eating or drinking may, if not properly treated, be quite serious agents in the spread of disease and also knowing that proper washing methods would remove this source of infection, it would seem quite important that the work of this department be extended so that by means of laboratory tests, in conjunction with field inspections, we can determine the sanitary condition of the various food handling establishments.

By proper treatment of water supplies to destroy any infectious material that might be present in the water and by rigid field inspection and laboratory checks to insure the water supplies be maintained in good condition, there has been a very marked reduction in deaths from waterborne diseases. From past experience it is only fair to assume that by a combination of rigid field inspection with laboratory control of the various food handling industries we might reasonably expect a considerable reduction, possibly not of the death rate, but at least of the incidence of disease.

PROSECUTIONS

The Food and Drug Law does not provide for, nor is it the policy of the State Board of Health to prosecute every violation of the laws or regulations. However, continued violation and disregard of the warnings is followed by complaints being filed with the county attorneys having jurisdiction. This often does not mean the guilty party is punished as provided for by law. At certain seasons, notably of election years, it has been difficult to get some county attorneys to take any action.

The following tabulation shows the number of complaints filed and licenses revoked since the provision for licenses became effective in 1922:

	1921	1923	1925	1927	1929	1931	1933	1935	1937
Biennium	1922	1924	1926	1928	1930	1932	1934	1936	1938
Complaints	16	9	29	29	26	20	121	89	125
Licenses revoked	13	17	4	3	6	0	5	11	4

Fines collected as a result of prosecution for violation of the Food and Drug laws are deposited with the State Treasurer to be placed in the General Fund.

LABORATORY

The laboratory work of the Food and Drug Division is seriously curtailed by not having a full-time assistant in the laboratory. Except as emergencies arise the entire work for the state of inspecting food handling establishments, of collecting samples of foods and drugs for analysis, of making all analyses in the food and drug laboratory, of cooperation with the Federal Food and Drug Administration in supervision of foods and drugs shipped into the state, of supervising and checking the issuing of licenses, of cooperating with the local health officers in their sanitary work and of carrying on the necessary correspondence of the office, is done by the Director. All of this work is important for the enforcement of the Food and Drug Act and in the best interests of the health of the public. Since the amount of laboratory work depends largely on the activity of the Director in collecting samples, it is the only phase of the work that can be regulated to the amount of time available.

It is recommended that the personnel of the department be increased by the addition of a full-time chemist as laboratory assistant and two full-time field inspectors in addition to the Director. This would permit more rigid field inspection of the various food handling establishments and at the same time allow for a better check on foods manufactured within the State and not subject to Federal inspection and regulation.

The laboratory work for the past biennium is summarized as follows:

Total samples analyzed		521
Samples classed as "passed"	183	
Samples classed as "not passed"	143	
Samples classed as "unofficial"	28	
Samples in beer parlor survey	167	

Of the 354 routine samples analyzed, exclusive of the beer parlor survey, 52% were satisfactory and 40% unsatisfactory. This does not indicate 40% of our foods are adulterated or misbranded because samples are collected from foods of a suspicious character. Where the adulteration is of a serious nature or where repeated warnings have been given and disregarded by the operator, the county attorney is requested to prosecute the guilty party.

Also, in addition to the regular laboratory work, the following special analyses were made:

1. Soap and washing soda for the State Purchasing Agent to determine, of the various bids submitted, the best soap or soda for the State to purchase.

2. Prunes and rice for the surplus commodities division of the Public Welfare organization to determine whether they were fit for human consumption.

3. Canned beans for relief distribution. Some relief clients claimed the beans had made them sick. Unopened samples from the same lot of beans were found in good shape. The remainder of the can from which the clients had eaten showed the presence of contaminating organisms to indicate laxness on the part of the clients and contamination of the material after opening.

4. Rubbing alcohol for the State Purchasing Agent to determine the suitability for use at the State Orphans' Home, Twin Bridges.

SPECIAL INVESTIGATIONS

Since the Director of the Food and Drug Division has been in the field on trips to cover most of the State, there frequently arise special problems that he is called on to investigate. Occasionally field inspections are made in cooperation with other divisions of the Board of Health. During the past biennium the most important special investigations were as follows:

1. At Missoula, at the request of the University health department: (a) certain boarding and rooming houses catering particularly to university students. (b) the fountain and lunch room of the University's new student union building.
2. At the request of Dr. Dunn: the bakery, meat market, kitchen and commissary at the Warm Springs Sanitarium.
3. An epidemic of sore throat at Columbia Falls to determine whether the source of infection might possibly be improperly washed beer glasses.
4. The importation of Canadian fish infested with parasites. After contacting the customs officials with regard to these fish, the importation of fish was stopped until samples had been examined and passed by the Federal Food and Drug Administration.
5. Housing facilities of the Billings Public Welfare Office.
6. Sanitation of Cascade County Poor House No. 2.

FEDERAL COOPERATION

The Montana Pure Food and Drug Law is patterned after the Federal Food and Drug Law. However, the state law governs only those products produced, manufactured or sold within the state. Foods produced or manufactured outside of Montana may be withheld from sale if found adulterated or misbranded, but the producer, manufacturer or shipper may only be held accountable under Federal law. The Montana Food and Drug Division is very grateful to the Federal Food and Drug Administration for cooperation and assistance given in informing us of shipments into the state of suspected products. Also for its action against the shippers of these illegal products, since the shipper is the one at fault, rather than our local merchants. In cooperation with the Federal Administration the following work was done:

1. Warning was sent to all doctors of the State with regard to the Elixir Sulphanilamid that caused so many deaths in the Fall of 1937 throughout the East and South. None of this material had been shipped to Montana. However, the Federal Administration notified us of the shipment into Missoula, of some Orange Bitters containing the same poisonous solvent as used in the Elixir. These Bitters were confiscated and destroyed. Examination was made of an Elixir shipped to Philipsburg and suspected of containing this same poisonous solvent. It was found to be satisfactory and released for sale.

2. A product "Celto" made from celery and tomato juice was found to be responsible for several cases of sickness. The material was embargoed and samples collected for the Federal Department. Examination showed the presence of tin in poisonous amounts so all of the material on hand was destroyed.

3. Supervision was made of the relabeling of a shipment of canned cherries and a shipment of imitation lemon juice at the Western States Grocery in Butte.

4. Samples for Federal examination were collected of the following products:

(a) Canned tuna fish—Butte.

(b) Walnut meats—Bozeman, Billings, Helena, Lewistown.

(c) Canned cherries—Bozeman, Helena, Butte.

(d) Canned sardines—Helena

(e) Canned huckleberries—Helena.

(f) Frozen oranges—Missoula, Helena.

HOTEL INSPECTION

An annual inspection of hotels is required by law. However, no appropriation is made for this work, nor are license fees, which would make funds available, required. Any inspections made are done by the local or county health officers or their deputies. Blanks to be used in scoring hotels are issued by this department for use by the health officers at the time of their inspections. Copies of the State Hotel Laws and Board of Health regulations are furnished for distribution. Particular stress is laid on cleanliness, length of sheets, ventilation, fire escapes and general sanitation.

CLERICAL WORK

Until 1936 all stenographic work was done by a part-time stenographer who devoted the rest of her time to work for the Water and Sewage Division. Early in 1936 Federal funds made available through the Social Securities Act enabled us to employ a full-time stenographer. This full-time stenographer is still being paid with Federal funds.

Form letters are sent to each licensed establishment to notify them of expiration of licenses and furnish them with application blanks to use in applying for new licenses. Form letters are also sent out informing the licensee of new regulations, new standards or changes in existing regulations. Also, letters are frequently sent out to the Health Officers and the Food and Drug departments of other states. Printed placards of the regulations are sent out with each license once during the biennium and during the remainder of the time to any new establishment opening up.

The increase in office work is clearly shown by the following tabulation:

Biennium	Letters Written	Licenses Issued	Approximate Form Letters	Placards
1929-1930	1,500	8,575	18,000	8,575
1931-1932	1,600	8,208	20,000	8,208
1933-1934	4,000	8,709	25,000	8,709
1935-1936	6,000	10,136	30,000	6,400
1937-1938	6,500	11,719	32,000	7,000

PROPOSED LEGISLATION

At the last session of Congress a new Federal Food, Drug and Cosmetic Law was enacted. The new law materially strengthens the old Food and Drug Law and in addition includes the heretofore unrestricted field of cosmetics. With the convening of the Thirty-sixth Legislative Assembly it will have been 28 years since the passage of the present Montana Pure Food and Drug Law. During the intervening years the food and drug industries have devised new methods of producing, handling, processing, manufacturing, transporting and storing or placing these products on the market. Almost the entire field of cosmetics has been developed also during these 28 years. The cosmeticians have quite definitely shown the need of including that branch of industry under regulation and control since they have begun the use, in their products, of chemicals, dyestuffs or other substances that are known to be injurious to health under prescribed methods of use. It is recommended that our present Food and Drug Law be so changed by amendments or by enacting a new law so that it will be in conformity with the new Federal Food, Drug and Cosmetic Law.

The State Tourist Camp Law is difficult to actively enforce in its entirety because of the difficulty of distinguishing between so-called "dude" ranch and a tourist camp as defined. Our inspection of "dude" ranches shows the need of just as much supervision of their water supplies, garbage and sewage disposal and other sanitary features as is needed with any other tourist accommodations. It is recommended that our present Tourist Camp Law be amended to include the so-called "dude" or "guest" ranches.

Under our present hotel law the State Board of Health is delegated to enforce the act and "engage or appoint such assistants or inspectors as may be needed in enforcing the provisions of this act and the rules and regulations as provided for under the preceding section. * * * The State Board of Health shall also fix their compensation and shall assign to them their duties." The license fee provided for in the bill as originally presented was deleted so no money has been available other than from our regular appropriation and no active enforcement of this law has been done by the local or county health officers. At the present time there is a new phase of transient rooms that should be given some thought. That is the transient or tourist rooms being advertised and rented in a number of private homes. Under the present hotel law, there must be five or more rooms available for transients to constitute a hotel. In a number of instances apartment homes have been developed and advertised as tourist apartments. It is recommended that the present hotel law be changed to include under regulation and supervision the entire field of lodging facilities as covered in a number of other states. This should include the so-called boarding and rooming houses, apartment houses, tourist accommodations (other than tourist camps or guest ranches), and any other sleeping accommodations operated for hire.

As indicated in the report there has been a decided increase in all phases of work involved in the enforcement of the Food and Drug Law. If the work is to be continued and the people of the State given protection against adulterated and misbranded foods and drugs and against insanitary conditions of manufacture, storage and sale of foods and beverages, and if the people are to be assured good drugs accurately compounded under sanitary conditions, and if the ladies in particular are to be assured of freedom from worry with regard to the use of cosmetics, then the activities of this department should be considerably extended.

Believing the burden of expenses involved should fall on the industries and not directly on the taxpayers it is recommended that the funds necessary for such extension of activity be raised by means of a registration law requiring the registration of foods, patent or proprietary drugs and cosmetics. Manufacturers residing in the State and regularly licensed to conduct their establishment under existing laws should be exempt from any registration fees. Those establishments operating outside of the State and contributing in no way through licenses or taxes to the expense of such regulatory work, yet shipping their products into the State to compete with our local industries, should be required to register their products and pay a registration fee. Any monies so received should be definitely set aside by the State Treasurer to be used in actively enforcing the Food, Drug and Cosmetic Law with any unexpended balance at the end of the year being deposited to the credit of the General Fund.

MONTANA STATE BOARD OF HEALTH BIENNIAL REPORT OF THE COMMUNITY SANITATION PROJECT

M. S. Stanley, Assistant Supervisor

To: W. F. Cogswell, M. D., State Health Officer.

Sir:

It is my privilege and honor to submit the biennial report of the Community Sanitation Program for your consideration. The report covers the period ending November 30, 1938.

This project continues to be carried on under the joint supervision and cooperation of the United States Public Health Service, the Montana State Board of Health and the Works Progress Administration, the Works Progress Administration furnishing all labor; the United States Public Health Service furnishing the technical supervision and the State Board of Health furnishing office space, equipment and supplies.

Since May, 1937, the project has been state wide, but due to the different wage rates throughout the State, it is carried on in county units.

Until July 1, 1938, the United States Public Health Service paid the salaries and travel expenses of all technical supervision of the project, but since that time, and due to the curtailment of funds in Washington, the Service pays only the salary and expense of one District Director and the Works Progress Administration is paying the salary and expense of the Assistant State Director.

Approximately seventy per cent of the privies constructed in the last two years are of all new material and painted. The balance, or thirty per cent, are what we term as a "remodel job." They are standard buildings, same size and dimensions, concrete slab and riser; new material in seat, vent pipe and roof, but the building itself is made from second-hand lumber obtained from wrecking a sheep shed, the old privy or a chicken house. Such buildings are most prevalent in the northern and eastern parts of the State where property owners cannot afford the $25.00 or $30.00 for a new building, but are sanitary-minded enough to be willing to dispense with the sheep shed and $10.00 in order that they might have a good privy.

Our greatest difficulty at present is getting orders for more privies.

A number of counties that have been operating continuously for the past three years are getting pretty well supplied with sanitary privies. The lumber companies do considerable advertising and with the assistance of Mr. Forbes, State Food and Drug Inspector, and Mr. Raitt, State Tourist Camp Inspector, we have been able to keep our crews building privies. In some counties, the County Health Officer has helped the project considerably, but it is believed that further advantage could be gained if these officials were properly urged to assist in the promotion of this project.

Over forty states are now participating in Community Sanitation Projects.

West Virginia has consistently led all other states in production and lays claim to the fact that since the beginning of the program in 1933, the typhoid cases reported each year have been reduced from 1,265 in 1932 to 348 in 1937.

During the three years the program has been in operation in this State, we have constructed and delivered 7,082 privies to private homes; 1,744 to rural schools and 2,339 other, or semi-public places, or a total of 11,165 sanitary pit privies in the State.

The occasional testimonies of the 10,000 clients who have benefited directly, the noticeable change in attitude of most county editors who have seen at first hand the benefits to health and happiness; the continued enthusiasm of many civic groups, and a constant barrage of favorable comment by City, County and State Health Officers, have all prasied the cause of the "privy project."

And so, despite the rather high average unit cost, a majority of Montana citizens continue to clamor for continuation of the efforts of three or four hundred Works Progress Administration workers who toil monthly on this program.